RSTS/E

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THE SOFTWARE DISPATCH

digital

RSTS/E SOFTWARE DISPATCH

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The RSTS/E Software Dispatch complements the Software Dispatch Review for RSTS/E V6C-03. New and revised Software Product Descriptions, programming notes, software problems and solutions, and documentation corrections are published here. Much of the material is developed from Software Performance Report (SPR) answers significant to the general audience and is printed here to supplement the maintenance notebook (established by the Software Dispatch Review).

PRODUCTS SUPPORTED in the RSTS/E SOFTWARE DISPATCH

APL-11 V1
ASSIST-11 V1
BASIC-PLUS-2 V1
BASIC-PLUS-2/RMS-11K V1
COBOL-11 V3
CTS11/RSTS/E V1.1
CTS-500 V3
CTS-500/2780 V3
DATATRIEVE-11 V1
DECAL V2
DECnet/E V1
DIBOL-11/DECFORM V1, V4
DMS-500 V2
FORTRAN IV/RSTS-E V2
PLOT 11/RSTS/E V1.1
RMS-11K V1.5
RPG II V8.02
RSTS/E V6C
RSTS-E/2780 V3
SORT-11 V2
VT55 BASIC-PLUS-2 V1
WISE V1

DISTRIBUTION

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Roxanne Alexander, Associate Editor

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VMS

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IMPORTANT

See the new DECUS Information and Membership Form at the back of this Dispatch.

SPR USER LETTER

The Dispatch **SPR User Letter** has been revised to reflect the new SPR form which has been available and has been in distribution for several months. This new SPR form can be readily identified by the priority section which uses a 1-5 numbering scheme rather than high, medium and low. These forms can be obtained from your local Digital office or SPR Center or by requesting them from SPR Administration.

How To Make The Best Use Of The SPR Form

What We Can Do For you

1. Blank SPR forms are available upon request in the desired quantities through the SPR Administration (P.O. Box F) and your local office/SPR Center.

2. Copies of the SPR acknowledgement and answer are sent to the appropriate DIGITAL Office/SPR Center for their information.

3. Your local office is provided status for submitted SPRs upon request by contacting SPR Administration.

4. Information is provided to the pertinent District Software Managers on High Priority SPRs that are submitted by customers in their districts.

5. SPRs marked PROBLEM/Error will have a response for supported Category A and B products. These SPRs should refer to suspected deficiencies in the software.

6. SPRs marked SUGGESTION are forwarded to the pertinent software group for information purposes, and are responded to at their discretion.

What You Can Do For Us

1. Customer Name and Address and Problem Statement should always be typed or printed clearly.

2. An SPR should be submitted with only one problem on it. Putting more than one problem on an SPR can greatly lengthen the turn-around time.

3. WHENEVER POSSIBLE, SUBMIT AN SPR WITH ATTACHMENTS, SUCH AS MACHINE READABLE DATA, DETAILED INSTRUCTIONS ON HOW TO REPRODUCE THE PROBLEM, PROGRAM AND/OR DATA FILES, LISTINGS, AND CONSOLE LOG.

4. It would be most helpful to all concerned if problems with patches are reported as soon as possible.

5. For security SPRs, it is imperative that the DO NOT PUBLISH box be marked.

6. It would be helpful if tapes submitted with SPRs are labeled (track and density), and have a directory attached.

7. Should you ever receive an unacceptable SPR response, please contact us or the appropriate SPR Center so that the response may be addressed.

8. SPRs should not be used for problems concerning software policy, software distribution, or hardware. The local office should be contacted in these cases.

7.2 Commonly Used System Programs (CUSPs) Patch Levels

This report reflects the current Version/Edit level of all of the Commonly Used System Programs (CUSPs) supplied as part of the standard RSTS/E V06C-03 System Library Programs release.

System Utilities Package

BUILD	V06C-03	DIRECT	V06C-03ABCD	DISPLY	V06C-03AB	VT05	V06C-03
VT50	V06C-03	DSKINT	V06C-03	GRIPE	V06C-03	INIT	V06C-03A
INUSE	V06C-03	LOGIN	V06C-03	LOGOUT	V06C-03A	MONEY	V06C-03
ODT	V06C-03A	PLEASE	V06C-03	PRIOR	V06C-03	QUOLST	V06C-03
REACT	V06C-03	REORDR	V06C-03A	SHUTUP	V06C-03	SWITCH	V06C-03
SYSCAT	V06C-03	SYSTAT	V06C-03AB	TALK	V06C-03	TTYSET	V06C-03
UMOUNT	V06C-03ABC	UTILTY	V06C-03	UTILT1	V06C-03AB		

Data Manipulation Package

BPCREF	V06C-03AB	BPCRF1	V06C-03	COPY	V06C-03	EDIT	V06C-03AB
EDITCH	V06C-03A	FILCOM	V06C-03A	FLINT	V06C-03ABC	FLX	V06C-03A
MAKRTS	V06C-03	PIPSML	V06C-03	PIPEXT	V06C-03ABC	PMDUMP	V06C-03A
RUNOFF	V06C-03ABC						

Error Control Package

ANALY1	V06C-03	ANALYS	V06C-03	ERRBLD	V06C-03	ERRCPY	V06C-03
ERRDET	V06C-03A	ERRDIS	V06C-03	ERRINT	V06C-03		

Backup Package

BACCOM	V06C-03ABC	BACCON	V06C-03AB	BACDEL	V06C-03	BACDIR	V06C-03AB
BACDMP	V06C-03	BACDSK	V06C-03A	BACENT	V06C-03A	BACFRM	V06C-03ABCDEF
BACLAB	V06C-03	BACLOD	V06C-03AB	BACLST	V06C-03A	BACMNT	V06C-03ABCDEF
BACPRM	V06C-03	BACKTO	V06C-03ABCD	BACKUP	V06C-03ABCD		

Spooling and Operator Services Package

OPSER	V06C-03	OPSRUN	V06C-03AB				
QUE	V06C-03ABCDEFGH	QUEMAN	V06C-03	QUMRUN	V06C-03AB		
CHARS	V06C-03	SPOOL	V06C-03	SPLIDL	V06C-03	SPLRUN	V06C-03AB
BATDCD	V06C-03	BATCH	V06C-03	BATIDL	V06C-03A		
BATDEC	V06C-03ABCDEFGH	BATRUN	V06C-03ABCDE				

User Environment Test Package

UETP	V06C-03A	ACCTST	V06C-03A	AC0TST	V06C-03A	AC1TST	V06C-03A
AC2TST	V06C-03A	AC3TST	V06C-03A	AC4TST	V06C-03A	AC5TST	V06C-03A
DBEXER	V06C-03	DPEXER	V06C-03	DREXER	V06C-03	DMEXER	V06C-03
DSEXER	V06C-03	DFEXER	V06C-03	DKEXER	V06C-03	DXEXER	V06C-03
MTEXER	V06C-03	DTEXER	V06C-03	CPEXER	V06C-03	CREXER	V06C-03
PPEXER	V06C-03	PREXER	V06C-03	KBEXER	V06C-03	LPEXER	V06C-03
SCRIPT	V06C-03	SCRPTB	V06C-03	CVTSCP	V06C-03	OPTPRM	V06C-03
OPTPRK	V06C-03	OPTPRB	V06C-03	TDLSRT	V06C-03	TDLXQK	V06C-03
TDLMQK	V06C-03	TDLOQK	V06C-03	TDLSQK	V06C-03A	CRFILE	V06C-03A
TAPSRT	V06C-03	TAPSRU	V06C-03	DECMRG	V06C-03A	VERIFY	V06C-03
RANMAK	V06C-03	JSTATS	V06C-03	DSTATS	V06C-03	CPUTST	V06C-03
FILMIN	V06C-03	CRUDAT	V06C-03	FLOPPY	V06C-03A	CRDATA	V06C-03A
BUILDR	V06C-03A	PKBSNE	V06C-03				

Automated Patching Facility Package

AUTOED	V06C-03	CPATCH	V06C-03	PATCPY	V06C-03	PBUILD	V06C-03ABCD

DECnet/E Utilities

NCROOT	V06C-03AB	NETFNC	V06C-03	NCP	V06C-03A	NCU	V06C-03AB
NIP	V06C-03	LSN	V06C-03	TLK	V06C-03A		

4.Ø Notebook Maintenance

Each month you should take apart the Software Dispatch and file the new articles by sequence number in your notebook. If an article is a replacement, discard the superseded article. Each article addresses a single topic and its title gives the symptom or a one-line problem description. This information appears at the top of each page. For example:

RSTS/E Software Dispatch, April 1978

RSTS/E VØ6C-Ø3 Seq 1Ø.12.3 O
System Utilities Package
LOGIN Page 1 of 2

LOGIN CAN PRINT A MESSAGE FOR SPECIFIC ACCOUNTS - OPTIONAL LOGIN PATCH

The System COMPONENTS.SUBCOMPONENTS are listed in Section 4.1. Articles for each subcomponent are assigned a sequence number which uniquely identifies the article within that component category. As each new article is published for a sub-component, it is assigned the next higher sequence number. The sequence numbers are defined as COMPONENT.SUBCOMPONENT.ISSUE number. An example is the 1Ø.12.3 shown in the upper right corner of the sample heading. Replacement articles are noted as such.

Articles for subordinate software that is not unique to RSTS/E are to be filed by product and then component. Articles are sequenced by component after this sorting process. In some cases, there are so few articles that they are sequenced only by product. Missing sequence numbers indicate problems which only apply to other operating systems. The cumulative index is published in the Dispatch to help you maintain the notebook for the complete RSTS/E system.

A flag will appear after the sequence number:

M = Mandatory patch
O = Optional patch (as in the sample heading)
R = Restriction
N = Note

4.1 RSTS/E COMPONENT.SUB-COMPONENT Assignments

The COMPONENT.SUB-COMPONENT numbers outlined below appear on articles to be filed in Section 7.0 of this notebook.

RSTS/E MONITOR

1.0 Initialization
- 1.1 INIT.SYS Program Patches
- 1.2 INIT.SYS Program Notes

2.0 System Generation
- 2.1 SYSGEN Patches
- 2.2 SYSGEN Notes

3.0 Executive
- 3.1 Monitor Patches
- 3.2 Monitor Notes
- 3.3 Terminal Service Patches
- 3.4 Terminal Service Notes
- 3.5 File Processor Patches
- 3.6 File Processor Notes
- 3.7 Device Driver Patches
- 3.8 Device Driver Notes

4.0 BASIC-PLUS
- 4.1 BASIC-PLUS Patches
- 4.2 BASIC-PLUS Notes
- 4.3 Programming Hints
- 4.4 Math Packages
- 4.5 Matrix Functions
- 4.6 PRINT-USING
- 4.7 Record I/O
- 4.8 Virtual Core
- 4.9 String Arithmetic

5.0 RSTS/E 2780 Device Driver
- 5.1 2780 Device Driver Patches
- 5.2 2780 Device Driver Notes

6.0 DECnet/E Package
- 6.1 DECnet/E Patches
- 6.2 DECnet/E Package Notes

7.0 (Reserved)

8.0 (Reserved)

9.0 (Reserved)

RSTS/E UTILITIES

10.0 System Utilities Package

10.1 Package Notes
10.2 BUILD Utility
10.3 DIRECT
10.4 DISPLY
10.5 VT05 Adaptation of DISPLY
10.6 VT50 Adaptation of DISPLY
10.7 (Reserved)
10.8 DSKINT
10.9 GRIPE
10.10 INIT
10.11 INUSE
10.12 LOGIN
10.13 LOGOUT
10.14 MONEY
10.15 ODT
10.16 PLEASE
10.17 PRIOR
10.18 QUOLST
10.19 REACT
10.20 REORDR
10.21 SHUTUP
10.22 SYSCAT
10.23 SYSTAT
10.24 TALK
10.25 TTYSET
10.26 UMOUNT
10.27 UTILTY
10.28 UTILT1
10.29 SWITCH
10.30 VT55
10.31 DEMO55

11.0 Data Manipulation Package

11.1 Package Notes
11.2 COPY
11.3 EDIT
11.4 EDITCH
11.5 FILCOM
11.6 FLINT
11.7 PIPSML
11.8 PIPEXT
11.9 RUNOFF
11.10 BPCREF
11.11 BPCRF1
11.12 PMDUMP
11.13 FLX
11.14 MAKRTS

12.0 Error Control Package
- 12.1 Package Notes
- 12.2 ANALY1
- 12.3 ANALYS
- 12.4 ERRCPY
- 12.5 ERRDET
- 12.6 ERRDIS
- 12.7 ERRINT
- 12.8 ERRBLD

13.0 Backup Package
- 13.1 Package Notes
- 13.2 BACCOM
- 13.3 BACCON
- 13.4 BACDEL
- 13.5 BACDIR
- 13.6 BACDMP
- 13.7 BACDSK
- 13.8 BACENT
- 13.9 BACFRM
- 13.10 BACLAB
- 13.11 BACLOD
- 13.12 BACLST
- 13.13 BACMNT
- 13.14 BACPRM
- 13.15 BACKTO
- 13.16 BACKUP

14.0 Spooling and Operator Services Package
- 14.1 Package Notes
- 14.2 OPSER
- 14.3 OPSRUN
- 14.4 QUE
- 14.5 QUEMAN
- 14.6 QUMRUN
- 14.7 CHARS
- 14.8 SPOOL
- 14.9 SPLIDL
- 14.10 SPLRUN
- 14.11 BATDCD
- 14.12 BATCH
- 14.13 BATIDL
- 14.14 BATDEC
- 14.15 BATRUN

15.0 User Environment Test Package
- 15.1 Package Notes
- 15.2 UETP
- 15.3 ACCTST
- 15.4 AC0TST
- 15.5 AC1TST
- 15.6 AC2TST
- 15.7 AC3TST
- 15.8 AC4TST
- 15.9 AC5TST
- 15.10 (Reserved)
- 15.11 DBEXER
- 15.12 DPEXER
- 15.13 DREXER
- 15.14 DMEXER

15.15 DSEXER
15.16 DFEXER
15.17 DKEXER
15.18 DXEXER
15.19 MTEXER
15.20 DTEXER
15.21 CPEXER
15.22 CREXER
15.23 PPEXER
15.24 PREXER
15.25 KBEXER
15.26 LPEXER
15.27 SCRIPT
15.28 SCRPTB
15.29 CVTSCP
15.30 OPTPRM
15.31 OPTPRK
15.32 OPTPRB
15.33 TDLSRT
15.34 TDLXQK
15.35 TDLMQK
15.36 TDLOQK
15.37 TDLSQK
15.38 CRFILE
15.39 TAPSRT
15.40 TAPSRU
15.41 DECMRG
15.42 (Reserved)
15.43 VERIFY
15.44 RANMAK
15.45 JSTATS
15.46 DSTATS
15.47 CPUTST
15.48 FILMIN
15.49 CRUDAT
15.50 FLOPPY
15.51 CRDATA
15.52 BUILDR
15.53 PKBSNE
15.54 Script files

16.0 System Management Guidelines

17.0 Automated Patching Facility Package
17.1 Package Notes
17.2 PATCPY
17.3 PBUILD
17.4 CPATCH
17.5 AUTOED
17.6 ONLPAT.SAV

18.0 (Reserved)

RSTS/E DOCUMENTATION

19.Ø Documentation

19.1	Documentation Directory	DEC-11-ORDAA-B-D
19.2	RSTS/E System Generation Manual	AA-2669C-TC
19.3	RSTS/E System Manager's Guide	DEC-11-ORSMD-B-D(+DN1)
19.4	RSTS/E System User's Guide	DEC-11-ORSUB-A-D(+DN1)
19.5	BASIC-PLUS Language Manual	DEC-11-ORBPB-B-D
19.6	RSTS/E Programming Manual	DEC-11-ORPMA-B-D(+DN1)
19.7	RSTS/E RUNOFF User's Guide	DEC-11-URUNA-B-D
19.8	RSTS/E Text Editor Manual	DEC-11-UTEMA-A-D
19.9	RSTS/E VØ6C-Ø3 Release Notes	AA-5246B-TC
19.1Ø	RSTS/E Pocket Guide	DEC-11-ORFCA-A-D
19.11	(Reserved)	
19.12	RSTS/E User Environment Test Package	AA-57Ø4A-TC
19.13	RSTS/E Task Builder Reference Manual	AA-5Ø72A-TC
19.14	Introduction to RMS-11	AA-ØØØ1A-TC
19.15	RMS-11 MACRO Programmer's Reference Manual	AA-ØØØ2A-TC
19.16	RSTS/E RMS-11 Utilities User's Guide	AA-ØØØ3B-TC
19.17	DEC Editor Reference Manual	AA-5789A-TC
19.18	PDP-11 MACRO-11 Language Reference Manual	AA-5Ø75A-TC
19.19	RSTS/E DECnet/E System Manager's Guide	AA-5666A-TC
19.2Ø	RSTS/E DECnet/E User's Guide	AA-5667A-TC
19.21	RSTS/E DECnet/E Release Notes	AA-D426A-TC

RUN-TIME SYSTEMS SUPPORT

20.0 (Reserved)

21.0 RSX Emulator Package
- 21.1 Package Notes
- 21.2 (Reserved)
- 21.3 RSX.RTS
- 21.4 TKB.TSK
- 21.5 MAC.TSK
- 21.6 LBR.TSK
- 21.7 SYSLIB.OLB
- 21.8 RSXMAC.SML
- 21.9 PAT.TSK
- 21.10 EDT.TSK

22.0 RT-11 Emulator Package
- 22.1 Package Notes
- 22.2 RT11.RTS
- 22.3 CREF.SAV
- 22.4 EDIT.SAV
- 22.5 HOOK.SAV
- 22.6 LIBR.SAV
- 22.7 LINK.SAV
- 22.8 LOGIN.SAV
- 22.9 LOGOUT.SAV
- 22.10 MACRO.SAV
- 22.11 PAT.SAV
- 22.12 PATCH.SAV
- 22.13 PIP.SAV
- 22.14 SILUS.SAV
- 22.15 SYSBAT.SAV
- 22.16 SYSGEN.SAV
- 22.17 UTILTY.SAV

4.2 Subordinate Software

23.0 FORTRAN IV V2.0
- 23.1 Package Notes
- 23.2 COMPILER
- 23.3 OTS
- 23.4 Run-Time System

24.0 DMS-500 V02
- 24.1 Package Notes
- 24.2 DMSUTL
- 24.3 DMSFSS
- 24.4 DMSISR
- 24.5 DMSISC
- 24.6 DMSRAR
- 24.7 DMSISA
- 24.8 DMSRAA
- 24.9 DMSFSU
- 24.10 DMSISO
- 24.11 DMSRAO
- 24.12 DMSFSX
- 24.13 IAMGEN
- 24.14 IAMCRI
- 24.15 IAMDMP
- 24.16 IAMVFY
- 24.17 IAMPRI
- 24.18 IAMFNS
- 24.19 DSORT
- 24.20 DSORTD
- 24.21 DSORTF
- 24.22 DSORTX
- 24.23 DSORTS
- 24.24 DSORTM
- 24.25 DSORTO
- 24.26 DMS-500 User's Guide (DEC-11-ORDUA-B-D)

25.0 RSTS/E 2780 PACKAGE
- 25.1 Package Notes
- 25.2 RJ2780
- 25.3 RSTS/E 2780 User's Guide (DEC-11-ORJEA-B-D)

26.0 DIBOL-11/DECFORM V3C
- 26.1 Package Notes
- 26.2 Documentation
- 26.3 BUILD
- 26.4 DICOMP
- 26.5 DIBOL
- 26.6 DECFORM
- 26.7 ISMUTL
- 26.8 SORT

27.0 BASIC-PLUS-2 V1.04
- 27.1 Package Notes
- 27.2 BASIC2 Compiler Patches
- 27.3 BASIC2 Run-Time System Patches
- 27.4 BP2COM Run-Time System Patches
- 27.5 BASIC2 Object Library Patches
- 27.6 BP2COM Object Library Patches
- 27.7 BASRMS Object Library Patches

27.8 TRANSLATOR Utility
27.9 BASIC-PLUS-2 Language Manual (AA-0153A-TK)
27.10 BASIC-PLUS-2 RSTS/E User's Guide (AA-0154A-TC)
27.11 BASIC-PLUS-2 RSTS/E Installation Guide (AA-0156A-TC)

28.0 COBOL V3.0
28.1 Package Notes
28.2 COBOL Compiler
28.3 COBOL Object Library
28.4 COBOL ODL
28.5 COBOL Utilities
28.6 PDP-11 COBOL Language Reference Manual (AA-1749D-TC)
28.7 PDP-11 COBOL User's Guide (AA-1757C-TC)
28.8 PDP-11 COBOL Installation Guide (AA-1745C-TC)

29.0 RMS-11 V1.5
29.1 Package Notes
29.2 RMS11.RTS
29.3 RMS11.ODL
29.4 RMSLIB.OLB
29.5 RMSMAC.MLB
29.6 RMSUTL.OLB
29.7 RSTS/E RMS-11K Installation Guide (AA-5185B-TC)
29.8 (Reserved)
29.9 (Reserved)
29.10 RMS-11K V1.5
29.11 RMS-11K Package Notes
29.12 RMS11.RTS
29.13 RMS11.ODL
29.14 RMSLIB.OLB
29.15 RMSMAC.MLB
29.16 RMSUTL.OLB

30.0 SORT-11 V02
30.1 Package Notes
30.2 SORT Utility
30.3 PDP-11 SORT Reference Manual (AA-3341C-TC)

31.0 DECnet/E V1.0 Utilities
31.1 Package Notes
31.2 NCP
31.3 NCU
31.4 TLK
31.5 LSN
31.6 NIP
31.7 NETCPY
31.8 NCROOT
31.9 NETFNC
31.10 NFT
31.11 FAL

32.0 RPG II V8.02
32.1 Package Notes
32.2 COMPILER
32.3 OTS
32.4 RPGFNS
32.5 RPGASN
32.6 RPGDCV
32.7 RPGDMP
32.8 RPGESP

32.9 RPGFCV
32.10 RPGPCV
32.11 RPG II Report Program Generator Language Manual (AA-5371A-TC)
32.12 RPG II Report Program Generator User's Guide (AA-C866A-TC)

33.0 APL-11
33.1 Package Notes
33.2 Run-Time System Patches
33.3 Documentation

34.0 DATATRIEVE-11 V1
34.1 Package Notes

35.0 WISE V1
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RSTS/E VØ6C-Ø3
RSTS/E Executive
Terminal Service Notes

Seq 3.4.7 N
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******** Supersedes article dated September, 1978 ********

NOTE

The artilcle published in the September issue of the RSTS/E Software Dispatch reversed the parameters to enable and disable the CTRL/R feature.

TTYSET AND TTY SYS CALL CHANGES

Two new features of the terminal driver for RSTS/E VØ6C can be disabled or enabled using the TTYSET system program or the FIP SYS function call 16 - "Set terminal characteristics". The TTYSET changes were mentioned in the VØ6C Release Notes (page 2-11). The SYS call changes have not been documented.

CONTROL/R

CONTROL/R retypes your terminal's pending input buffer. This feature can be disabled in TTYSET by typing "NO CTRL/R" and enabled by typing "CTRL/R".

Byte 25 in FIP SYS call 16 controls this feature. This byte should be specified as "CHR$(N%)", where N% is

Ø	for no change
128	to disable CTRL/R
255	to enable CTRL/R

RESUME AFTER XOFF

The XON-XOFF protocol was changed in RSTS/E VØ6C. Previously any character typed would cancel the effect of an XOFF (CTRL/S). To comply with Digital's Terminal Synchronization Standard, RSTS/E VØ6C terminal service was changed so that only an XON (CTRL/Q) or a CTRL/C will cancel an XOFF. The TTYSET command "RESUME ANY" will revert the XOFF handling to the previous protocol. "RESUME CTRL/C" will re-establish the new protocol.

Byte 26 in FIP SYS call 16 controls this feature. This byte should be specified as "CHR$(N%)", where N% is

Ø	for no change
128	for the new protocol (RESUME CTRL/C)
255	for the previous protocol (RESUME ANY)

RSTS/E VØ6C-Ø3
Data Manipulation Package
PIPEXT

PIPEXT FAILS TO WRITE /FORMAT:V ANSI MAGTAPE FILES - MANDATORY PIPEXT PATCH

PROBLEM:

PIPEXT aborts with the message "?Record Too Long For Output Record" when "/FORMAT:V" is specified for magtape.

SOLUTION:

The patching procedure detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - PIPEXT.BAS=PIPEXT.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3AB
*G/Ø3AB/I/C/V<cr>
6!              EDIT            : Ø3ABC
*H/7!/V<cr>
7!              EDIT DATE       : 14-AUG-78
*G/14-AUG-78/-9C/16-FEB-79/V<cr>
7!              EDIT DATE       : 16-FEB-79
*H/21!/V<cr>
21!    VER/ED          EDIT DATE       REASON
*G/REASON/I<cr>
<lf>
  !<tab>6C-Ø3ABC<tab>16-FEB-79<tab>FIX /FORMAT:V PROBLEM.<esc>*V<cr>
  !    6C-Ø3ABC        16-FEB-79       FIX /FORMAT:V PROBLEM.
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø    I$="VØ6C-Ø3AB"
*G/Ø3AB/I/C/V<cr>
1Ø1Ø    I$="VØ6C-Ø3ABC"
```

```
*H/6095<tab>/V<cr>
6095     E%=3072%
*G/3072%/I<cr>
<If>
<tab>\ I1% = (O2% AND 4095%)+4% IF I5%=32%<esc>*V<cr>
        \ I1% = (O2% AND 4095%)+4% IF I5%=32%
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD PIPEXT<cr>

Ready

COMPILE $PIPEXT<40><cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
Data Manipulation Package
RUNOFF

RUNOFF FAILS IF FILENAME IS "KB" - MANDATORY RUNOFF PATCH

PROBLEM:

If you specify "KB" as the first 2 characters of the output filename, RUNOFF will interpret the response as "KB:" and ask the "Pause?" question. If you respond "Yes," RUNOFF aborts with the message "?RETURN without GOSUB at line 1ØØ3Ø."

SOLUTION:

The patching procedure detailed below will cause RUNOFF to properly check for output to a keyboard.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RUNOFF.BAS=RUNOFF.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3AB
*G/Ø3AB/I/C/V<cr>
6!              EDIT            : Ø3ABC
*H/7!/V<cr>
7!              EDIT DATE       : 18-JUL-78
*G/18-JUL-78/-9C/12-FEB-79/V<cr>
7!              EDIT DATE       : 12-FEB-79
*H/21!/G/REASON/V<cr>
21!    VER/ED          EDIT DATE       REASON
*I<cr>
<If>
  !<tab>6C-Ø3ABC<tab>12-FEB-79<tab>FIX KB-OUTPUT CHECK.<esc>*V<cr>
  !     6C-Ø3ABC        12-FEB-79       FIX KB-OUTPUT CHECK.
```

```
*H/600<tab>/V<cr>
600     I7$="V06C-03AB"
*G/03AB/I/C/V<cr>
600     I7$="V06C-03ABC"
*H/680<tab>/V<cr>
680     DAT$=XLATE(DATE$(0%),X9$)
*AV<cr>
        \ IF LEFT(OUTFILE$,2%)<>"KB" THEN
*G/"KB"/I<cr>
<lf>
<tab><tab>OR (INSTR(1%,OUTFILE$,":")=0%)<esc>*V<cr>
                OR (INSTR(1%,OUTFILE$,":")=0%) THEN
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD RUNOFF<cr>

Ready

COMPILE $RUNOFF<40><cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E V06C-03
Data Manipulation Package
BPCREF

Seq 11.10.3 M

BPCREF MISINTERPRETS MAT SCALAR MULTIPLICATION - MANDATORY BPCREF PATCH

PROBLEM:

When BPCREF encounters the internal code that was generated from a statement such as "MAT A = (K)*B", it misses the reference to B(), and sometimes generates the error message "?Bad code, SPR please."

SOLUTION:

The patching procedure detailed below will cause BPCREF to correctly interpret the multiplication of a matrix by a scalar.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - BPCREF.BAS=BPCREF.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : 03A
*G/03A/I/B/V<cr>
6!              EDIT            : 03AB
*H/7!/V<cr>
7!              EDIT DATE       : 31-JAN-78
*G/31-JAN-78/-9C/13-FEB-79/V<cr>
7!              EDIT DATE       : 13-FEB-79
*H/21!/G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-03AB<tab><tab>13-FEB-79<tab>CORRECT HANDLING OF MAT SCALAR<lf>
  !<tab><tab><tab><tab><tab>MULTIPLICATION.<esc>*V<cr>
  !                                     MULTIPLICATION.
```

RSTS/E VØ6C-Ø3
Data Manipulation Package
BPCREF

Seq 11.1Ø.3 M

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```
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø     ON ERROR GOTO 19ØØØ\ PRINT IF POS(Ø%)
*G/Ø3A/I/B/V<cr>
         \ VERSION$ = "VØ6C-Ø3AB"
*H/21Ø2Ø<tab>/V<cr>
21Ø2Ø    DATA     Ø8,Ø8,Ø4,Ø4,Ø8,Ø9,Ø9,Ø9,Ø2,Ø2,Ø2,Ø2,Ø2,Ø2,Ø2,Ø2
*G/Ø4,Ø4/-5C/Ø8,Ø8/V<cr>
21Ø2Ø    DATA     Ø8,Ø8,Ø8,Ø8,Ø8,Ø9,Ø9,Ø9,Ø2,Ø2,Ø2,Ø2,Ø2,Ø2,Ø2,Ø2
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD BPCREF<cr>

Ready

COMPILE $BPCREF<4Ø><cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
Backup Package
BACKTO

********** Supersedes Article February, 1979 **********

NOTE

This article, as published in the February issue of the RSTS/E Software Dispatch, will cause a subsequent restore operation from magtape to fail if the index on the backup set is used. In addition to giving the correct patch, this article describes a procedure for correcting the BACKTO program if the February patch has already been installed. Seq 13.15.5 N in this issue of the Software Dispatch describes a procedure for restoring the index from magtape BACKUP sets that were created while the patch published in February was in effect.

Since the erroneous article was published in February, the incorrect patch was never included on a patch kit. Patch kit version "F" will contain the correct patch. The patch kit will NOT contain the patch to undo the February patch if it was applied manually as published.

PROBLEM WHEN SPLIT FILE IS DELETED - MANDATORY BACKTO PATCH

PROBLEM:

If the last file to be backed up to magtape is being split and is deleted while being split, an extra end-of-file mark will be written on the last backup volume before the index, preventing BACKUP from recognizing the tape on a subsequent restore operation. The work file on disk, however, can be used.

SOLUTION:

The patching procedure detailed below prevents BACKTO from writing the extra end-of-file mark under the conditions described above, and allows a subsequent restore operation to use the index from the backup set. This procedure should be used if the February version of the patch has NOT been installed.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - BACKTO.BAS=BACKTO.BAS<cr>
#[logfile=]<cr>
*H/Ø3AB/I/C/V<cr>
 !                EDIT            : Ø3ABC
*H/12-MAY-78/-9C/Ø2-JAN-79/V<cr>
 !                EDIT DATE       : Ø2-JAN-79
*H/2Ø/G/REASON/V<cr>
  !     VER/ED          EDIT DATE       REASON
*I<cr>
<If>
  !<tab>6C-Ø3ABC<tab>Ø2-JAN-79<tab>HANDLE LAST FILE SPLIT AND DELETED.<esc>*V<cr>
  !     6C-Ø3ABC        Ø2-JAN-79       HANDLE LAST FILE SPLIT AND DELETED.
*H/1Ø49Ø<tab>/V<cr>
1Ø49Ø   D8%=D8% OR (A9% AND 12288%)
*G/UNLESS T9%/V<cr>
        \ Z%=MAGTAPE(2%,Ø%,6%) IF M%<>Ø% UNLESS T9%<>Ø%
*4C/ OR (ZØ%(C1%,3Ø%) AND 1Ø24%)=Ø%/V<cr>
        \ Z%=MAGTAPE(2%,Ø%,6%) IF M%<>Ø% UNLESS T9% OR (ZØ%(C1%,3Ø%) AND 1Ø24%)=Ø%
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD BACKTO<cr>

Ready

COMPILE $BACKTO<cr>

Ready

RUN $PIP<cr>
*=$BACKTO.BAC<232>/RE<cr>
*^Z

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

TO CORRECT FEBRUARY PATCH:

Performing the following system commands will correct the February patch, if it has already been installed. This procedure may be used whether or not the patch described in Seq 13.11.4 M (in the March issue of the RSTS/E Software Dispatch) has been applied. This procedure makes the same assumptions as those specified above in procedure section 1.

This procedure will not appear on the patch kit version "F". (See introductory NOTE)

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - BACKTO.BAS=BACKTO.BAS<cr>
#[logfile=]<cr>
*H/10490<tab>/V<cr>
10490    D8%=D8% OR (A9% AND 12288%)
*G/UNLESS T9%/G/1024%)/V<cr>
         \ Z%=MAGTAPE(2%,0%,6%) IF M%<>0% UNLESS T9% OR (Z0%(C1%,30%) AND 1024%)
*I/=0%/V<cr>
         \ Z%=MAGTAPE(2%,0%,6%) IF M%<>0% UNLESS T9% OR (Z0%(C1%,30%) AND 1024%)=0%
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

The person installing this patch should now follow the patching procedures 3 through 5 as described earlier in this article.

RSTS/E VØ6C-Ø3
Backup Package
BACKTO

Seq 13.15.5 N

RECOVERING A MAGTAPE BACKUP SET CREATED WITH INCORRECT FEBRUARY PATCH INSTALLED

The BACKUP utility will not correctly transfer the backup set index to magtape if Seq 13.15.3 M as described in the February issue of the RSTS/E Software Dispatch is in effect. On an attempt to mount the index volume of such a magtape backup set for a restore operation, BACKUP will abort with the message:

?Magtape record length error

A restore operation from a BACKUP set made while the incorrect version of the patch was in effect may be accomplished in one of two ways.

1. The on-disk work file from the backup run may be specified in response to BACKUP's "INDEX FILE<PRIMARY> ?" question in the restore run.

2. The index from the magtape BACKUP set may be copied to disk using the procedure described in this article. Once the index is on disk, a restore operation may be performed by entering the name of the new index file to BACKUP's "INDEX FILE<PRIMARY> ?" question.

NOTE

The corrected version of Seq 13.15.3 M appears in this issue of the Software Dispatch.

A small program is used to load the index from magtape to disk. This program does no checking to insure that the correct volume is loaded, or that it is a BACKUP set index volume. If the wrong tape is mounted for the program, it may abort with an error message, or the restore operation may later abort.

The program is included on Patch Kit "F". It is not long, however, and may be typed in by hand if the patch kit is not available.

PROCEDURE USING PATCH KIT "F":

If patch kit version "F" is available, mount it on a free drive and perform the following system commands (the drive on which the patch kit is mounted is referred to below as xxn:).

OLD xxn:PA1315.ØØ5<cr>

Ready

SAVE LOAD<cr>

Ready

COMPILE LOAD<cr>

Ready

Now mount the index volume of the magtape BACKUP set. The drive containing the backup set is referred to below as mtn:.

```
RUN LOAD<cr>
Magtape device? mtn:<cr>
Output index file? BACKUP.IND<cr>
Index loaded.

Ready
```

You may now run BACKUP to restore any information from the BACKUP set. Enter the file specification BACKUP.IND in response to the "INDEX FILE<PRIMARY> ?" question.

PROCEDURE WITHOUT PATCH KIT "F":

If patch kit "F" is not available, the program to load the index from the magtape backup set may be entered manually and run by entering the following commands.

```
NEW LOAD<cr>

Ready

10 INPUT "Magtape device"; D$<cr>
20 OPEN D$ AS FILE 1%, RECORDSIZE 4100%<cr>
30 I%=MAGTAPE(3%,0%,1%)<cr>
40 I%=MAGTAPE(4%,32767%,1%) UNTIL MAGTAPE(7%,0%,1%) AND 128%<cr>
50 I%=MAGTAPE(4%,32767%,1%)<cr>
60 I%=MAGTAPE(4%,32767%,1%) UNTIL MAGTAPE(7%,0%,1%) AND 128%<cr>
70 PRINT "Output index file";<cr>
80 INPUT LINE F$<cr>
90 OPEN CVT$$(F$,255%) FOR OUTPUT AS FILE 2%<cr>
100 ON ERROR GOTO 140<cr>
110 GET #1%<cr>
120 PUT #2%+SWAP%(1%), COUNT (RECOUNT/512%)*512%<cr>
130 GOTO 110<cr>
140 IF ERR=11% AND ERL=110% THEN RESUME 150 ELSE ON ERROR GOTO Ø<cr>
150 CLOSE 1%, 2%<cr>
160 PRINT "Index loaded"<cr>
170 END<cr>
SAVE<cr>

Ready

COMPILE LOAD<cr>

Ready
```

Now mount the index volume of the magtape BACKUP set. The drive containing the backup set is referred to below as mtn:.

```
RUN LOAD<cr>
Magtape device? mtn:<cr>
Output index file? BACKUP.IND<cr>
Index loaded.

Ready
```

You may now run BACKUP to restore any information from the BACKUP set. Enter the file specification BACKUP.IND in response to the "INDEX FILE<PRIMARY> ?" question.

RSTS/E VØ6C-Ø3 Seq 14.14.9 M
Spooling and Operator Services Package
BATDEC Page 1 of 3

BATDEC DOES NOT ENFORCE JOB TIME LIMITS - MANDATORY BATDEC PATCH

PROBLEM:

BATDEC defaults both the elapsed and CPU time limits to infinity rather than 1Ø minutes and infinity as documented.

NOTE

This patch may prevent some BATCH jobs from completing which previously executed properly. It will be necessary to minimally modify such jobs to include either a limit value or "/NOLIMIT" on the $JOB command.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - BATDEC.BAS=BATDEC.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3ABCDEFG
*G/Ø3ABCDEFG/I/H/V<cr>
6!              EDIT            : Ø3ABCDEFGH
```

```
*H/7!/V<cr>
7!              EDIT DATE       : 28-AUG-78
*G/28-AUG-78/-9C/20-FEB-79/V<cr>
7!              EDIT DATE       : 20-FEB-79
*H/20/V<cr>
20      !
*G/REASON/V<cr>
  !     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-03ABCDEFGH<tab>20-FEB-79<tab>ENFORCE CPU/TIME LIMITS.<esc>*V<cr>
  !     6C-03ABCDEFGH   20-FEB-79       ENFORCE CPU/TIME LIMITS.
*H/1010<tab>/V<cr>
1010    I$="V06C-03ABCDEFG"
*G/03ABCDEFG/I/H/V<cr>
1010    I$="V06C-03ABCDEFGH"
*H/11530<tab>/V<cr>
11530   C$=CVT$$(C$,497%)
*G/C$=LEFT(C$,Z1%-1%)/2AV<cr>
        \       C$=LEFT(C$,Z1%-1%)+RIGHT(C$,Z1%+1%) IF
*I<cr>
<tab>\<tab>C$=LEFT(C$,Z1%-1%)+CHR$(32%+128%)+RIGHT(C$,Z1%+1%)<lf>
<tab><tab>IF (Z2%=32%) AND (Z5% OR Z6%)<lf>
<esc>*V<cr>
        \       C$=LEFT(C$,Z1%-1%)+RIGHT(C$,Z1%+1%) IF
*H/12200<tab>/V<cr>
12200   L9%,CCL%=0%
*AKI<cr>
<tab>\ Z0$(14%)="600"<lf>
<tab>\ Z0$(15%)="4294970000"<lf>
<esc>*V<cr>
        \ ACC%=Z0%(J9%,8%) UNLESS ACC%=511%
*H/12230<tab>/V<cr>
12230   IF (ABS(S0%)=4%) OR (ABS(S0%)=25%) THEN GOTO 12220 IF S0%<0%
*G/THEN/V<cr>
12230   IF (ABS(S0%)=4%) OR (ABS(S0%)=25%) THEN GOTO 12220 IF S0%<0%
*10KI<cr>
<lf>
<tab><tab>Z=VAL(S0$) UNLESS S0%<0%<lf>
<tab><tab>\ Z=Z*10. IF S0%=25%<lf>
<tab><tab>\ Z=Z*60. IF S0%=4%<lf>
<tab><tab>\ Z=4294970000. IF Z>4294970000. OR S0%<0%<lf>
<tab><tab>\ E9%=2% IF Z<0% AND S0%>0%<lf>
<tab><tab>\ Z$=NUM1$(Z)<lf>
<tab><tab>\ Z0$(14%)=Z$ IF ABS(S0%)=4%<lf>
<tab><tab>\ LIM%=-1% IF ABS(S0%)=4%<lf>
<tab><tab>\ Z0$(15%)=Z$ IF ABS(S0%)=25%<lf>
<tab><tab>\ CPU%=-1% IF ABS(S0%)=25%<lf>
<tab><tab>\ Z0$(14%)="4294970000" IF S0%=25% AND LIM%=0%<lf>
<tab><tab>\ GOTO 12220<lf>
<esc>*V<cr>
                ! SET THE ELAPSED OR CPU TIME LIMIT?.
```

```
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD BATDEC<cr>

Ready

COMPILE $BATDEC<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
Spooling and Operator Services Package
BATRUN

Seq 14.15.7 M

PAUSE AND MOUNT ERRORS - MANDATORY BATRUN PATCH

PROBLEM:

1. The PAUSE and /WAIT commands cause BATRUN to go into a loop until instructed to CONTINUE.
2. The $MOUNT command aborts the job if the operator neglects to type the colon to terminate the device name.

SOLUTION:

1. The PAUSE command and /WAIT command will put BATRUN into a SLEEP loop.
2. Invalid responces to MOUNT requests will cause a re-prompt.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - BATRUN.BAS=BATRUN.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3ABCD
*G/Ø3ABCD/I/E/V<cr>
6!              EDIT            : Ø3ABCDE
```

```
*H/7!/V<cr>
7!              EDIT DATE       : 28-AUG-78
*G/28-AUG-78/-9C/22-FEB-79/V<cr>
7!              EDIT DATE       : 22-FEB-79
*H/20/V<cr>
20      !
*G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-03ABCDE<tab>22-FEB-79<tab>PAUSE AND MOUNT ERRORS.<esc>*V<cr>
  !     6C-03ABCDE      22-FEB-79       PAUSE AND MOUNT ERRORS.
*H/1010<tab>/V<cr>
1010    I$="V06C-03ABCD"
*G/03ABCD/I/E/V<cr>
1010    I$="V06C-03ABCDE"
*H/13200<tab>! MOUNT COMMAND/V<cr>
13200   ! MOUNT COMMAND.
*H/13220<tab>/V<cr>
13220   T$="INVALID DEVICE - TRY AGAIN" IF R$<>NULSTG$
*G/R$=R$+LOGI$/V<cr>
        \ R$=R$+LOGI$
*0AK3AV<cr>
        \ GOTO 13220 IF (ASCII(RIGHT(Z$,30%))>128%) AND (JOBMOD%=0%)
*I<cr>
<tab>\ CHANGE Z$ TO Z%<lf>
<tab>\ GOTO 13220 IF (((Z%(29%)+SWAP%(Z%(30%))) AND -31079%) OR<lf>
<tab><tab>(Z%(29%)+SWAP%(Z%(30%)) AND 8192%)=0%) AND (JOBMOD%=0%)<lf>
<tab>\ R$=R$+LOGI$<lf>
<esc>*0AKV<cr>
        \ GOTO 13290 IF JOBMOD%
*G/GET OUT./V<cr>
                ! IF JOBMODIFICATION WAS REQUESTED, GET OUT.
*I<cr>
<lf>
<tab><tab>! -31079%=1+8+16+128+512+1024 EQV 32767<esc>*V<cr>
                ! -31079%=1+8+16+128+512+1024 EQV 32767
```

```
*H/21170<tab>/V<cr>
21170   IF S1%=Ø% THEN
*G/SLEEP S1%/V<cr>
        ELSE    SLEEP S1%
*I<cr>
<If>
<tab>\<tab>SLEEP 15% IF F1% AND 16384%<esc>*V<cr>
        \       SLEEP 15% IF F1% AND 16384%
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD BATRUN<cr>

Ready

COMPILE $BATRUN<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
System Management Guidelines
Creating a System Disk Recovery Medium

Seq 16.1.2 N

********** Supersedes Article November, 1978 **********

NOTE

In the procedure for creating a magtape recovery medium in Seq 16.1.2 N, November, 1978, the BACKUP programs end up being named to the RT11 run-time system when the recovery system is operating, and consequently will not run under BASIC-PLUS. The magtape recovery medium procedure in this article has been corrected to avoid this problem.

CREATING A SYSTEM DISK RECOVERY MEDIUM

Regular use of the RSTS/E BACKUP package (described in Chapter 18 of the RSTS/E System User's Guide and Chapter 8 of the System Manager's Guide) provides protection against loss of files if the system crashes, if disk errors occur, or if important files are accidently destroyed. However, the one situation from which BACKUP cannot recover is when the system disk or one or more of the monitor files is destroyed and the system cannot be started at all. One option in such an event is to use the RSTS/E distribution kit to regenerate the system, install all patches, build the complete system library, and then restore the remaining files on the system disk from the most recent backup. This is time consuming and error prone. Recovery is much simpler if you have a "recovery medium".

This article tells you how to create a system recovery medium (disk or tape) which contains your fully patched monitor, BASIC-PLUS Run-Time System, and enough of the BACKUP package to restore the rest of the system disk file structure. The recovery medium is bootable in a manner similar to the distribution medium and any intermediate tape (or disk) which you may have created during SYSGEN. In order to recover from destruction of the system disk, you will need the recovery medium and a recent backup of your system disk. Note that this backup must include an up-to-date version of the file [1,2]ACCT.SYS so that the recovery can enter all accounts properly. If you ever change your monitor, or install any patches in any of the files placed on the recovery medium, you should rebuild that medium.

To build the recovery medium, you must have ADDed the RT11 Run-Time System to RSTS/E. You must also have the programs PIP.SAV and HOOK.SAV in account [1,2]. If any of these files is not already on your system disk, mount the first volume of your distribution kit (as device xxn:) write locked. Use the following commands to copy the files and add RT11 (user input is underlined):

```
RUN $PIP.SAV<cr>
*SY:[Ø,1]*.*/MO:16=xxn:[Ø,1]RT11.RTS<cr>
*SY:$*.*=xxn:$HOOK.SAV<cr>
*^Z

Ready

RUN $UTILTY
<UTILTY's Header Line>
#ADD RT11<cr>
#^Z

Ready
```

Follow the instructions in the following sections, depending on whether you wish to build a recovery disk or magtape. In the examples, the file names RSTS.SIL and BASIC.RTS are used as the monitor SIL and default BASIC-PLUS Run-Time System. You should substitute the actual file names for your system.

Building a recovery disk

Using PIP or an editor, create the file RECOVR.CMD in [1,2] containing the following text:

```
SYØ:$*.*=IN:$BAC???.*
SYØ:$*.BAC<232>/RE
SYØ:$BACENT.BAC<1Ø4>/RE
```

Mount a formatted and initialized disk on a free disk drive. (The text below uses xxn: as the device designator and 'packid' as the pack identification for the recovery pack.) If necessary, shut down your system and use DSKINT to format a pack, or use the program DSKINT.BAC to re-initialize an already formatted scratch pack. Using UTILTY or UMOUNT, logically mount xxn:. Follow the procedure below to build the recovery disk (user responses are underlined):

```
RUN $PIP.SAV<cr>
*xxn:[Ø,1]*.*/MO:16=[Ø,1]RT11.RTS<cr>
*xxn:[Ø,1]=SY:[Ø,1]INIT.SYS,[Ø,1]RSTS.SIL,[Ø,1]BASIC.RTS,[Ø,1]ERR.ERR<cr>
*xxn:$*.*=SY:$PIP.SAV,$UTILTY.SAV,$RECOVR.CMD,$BAC???.*<cr>
*^Z

Ready

RUN $HOOK<cr>
*xxn:[Ø,1]INIT.SYS<cr>
Hook complete
*^Z

Ready
```

Dismount the recovery disk and save it. Also dismount the distribution medium.

To recover from the destruction of the system disk or one or more of the system files, you need the recovery disk and a recent BACKUP. Mount the recovery disk on one disk drive and bootstrap it. The RSTS/E initialization code runs and prints a header and the OPTION: prompt. On another disk drive, mount the disk on which to restore the system disk. Using the DSKINT option, recreate your system disk with the same parameters that you used at system generation time. Then use the COPY option to move your monitor files to the new system disk. Use the /A switch to copy all relevant files (see RSTS/E VØ6C System Generation Manual, p. 3-13). As part of the COPY option, INIT bootstraps that disk. If necessary, use the HARDWR option to change controller characteristics. Then INSTALL your monitor SIL and use REFRESH to create the required system files on your system disk. Use DEFAULT to change the system default run-time system to RT11. START the system on your new system disk and continue as follows (the recovery disk is referred to as xxn:).

```
?Can't find file or account
.ASSIGN xxn:IN
.MOUNT IN:packid/RO<cr>
.R IN:$PIP<cr>
*@IN:RECOVR.CMD<cr>
*^Z
.R IN:UTILTY<cr>
*DISMOUNT IN:<cr>
*SHUTUP

Option:
```

Dismount the recovery disk from drive xxn:. Use DEFAULT to change the system default run-time system back to BASIC. START the system. Your new system disk now has enough of the BACKUP package to restore the entire disk from a recent BACKUP. Do this now, specifying that no files be superseded. You must now use the STANDARD option of REACT to enter all accounts that BACKUP did not enter. Ignore the error messages generated when REACT tries to enter accounts that already exist. Your system disk is now ready to use.

Building a recovery magtape

Using PIP or an editor, create the file RECOVR.CMD in [1,2] containing the following text:

```
SYØ:$*.*/BL=IN:$*.*/RW:NO
SYØ:$*.BAC<232>/RE
SYØ:$BACENT.BAC<1Ø4>/RE
```

Locate the latest patched version of PIPEXT.BAS. If the file exists on tape and the system has only one tape drive, it must be copied to disk so that it may be copied to the recovery magtape in the next procedure. The device and account containing PIPEXT.BAS is referred to below as pip:. Mount a magtape on a free drive (referred to below as xxn:). Follow the procedure below to build the recovery tape (user responses are underlined):

```
RUN $PIP.SAV<cr>
*xxn:/ZE<cr>
Really zero xxn:? YES<cr>
*^Z

Ready

RUN $HOOK<cr>
*xxn:[Ø,1]INIT.SYS,SY:[Ø,1]INIT.SYS<cr>
Hook complete
*^Z

Ready

RUN $PIP.SAV<cr>
*xxn:[Ø,1]=SY:[Ø,1]RSTS.SIL,[Ø,1]BASIC.RTS,[Ø,1]ERR.ERR<cr>
*xxn:$*.*=pip:$PIPEXT.BAS,SY:$RECOVR.CMD,$BAC???.*<cr>
#^Z

Ready
```

Dismount the tape and save it.

To recover from the destruction of the system disk or one or more of the system files, you need the recovery tape and a recent BACKUP. Mount the recovery tape on a tape drive (referred to below as xxn:) and bootstrap it. The RSTS/E initialization code runs and prints a header and the OPTION: prompt. Mount the disk on which to restore the system disk. Using the DSKINT option, recreate your system disk with the same parameters that you used at system generation time. Then use the COPY option to move your monitor files to the new system disk. Use the /A switch to copy all files with the appropriate extensions (see RSTS/E VØ6C System Generation Manual, p. 3-13). As part of the COPY option, INIT bootstraps that disk. If necessary, use the HARDWR option to change controller characteristics. Then INSTALL your monitor SIL and use REFRESH to create the required system files on your system disk. START the system on your new system disk and continue as follows:

```
?Can't find file or account
?Program lost-Sorry

Ready

ASSIGN xxn:IN<cr>

Ready

OLD IN:PIPEXT<cr>

Ready

RUNNH
PIPEXT  VØ6C-Ø3ABC      RSTS VØ6C-Ø3 Timesharing
#$*.*=IN:$RECOVR.CMD<cr>
#@RECOVR.CMD<cr>
#RECOVR.CMD/DE<cr>
#^Z

Ready
```

Dismount the recovery tape from drive xxn:. Your new system disk now has enough of the BACKUP package to restore the entire disk from a recent BACKUP. Do this now, specifying that no files be superseded. You must now use the STANDARD option of REACT to enter all accounts that BACKUP did not enter. Ignore the error messages generated when REACT tries to enter accounts that already exist. Your system disk is now ready to use.

Notes on multiple disk systems

If your system disk is small, or if the public disk structure consists of more than one disk, some of the BACKUP or other programs may reside on a non-system public disk. In this case, you should copy to the recovery medium only those .BAC files that exist on the system disk. During the recovery procedure, after starting the system on your new system disk, you must physically mount and write-enable the other disks in your system's public structure. Type the command

```
MOUNT xxn:packid
```

for each non-system public disk, replacing xxn: with the disk name and unit, and packid with the pack ID for that disk. This procedure ensures that all required .BAC programs are available for the recovery.

Take the following precautions when creating a recovery disk:

1. If you can mount the recovery disk on an unused drive or in place of a private disk, do so. This leaves the full public disk structure mounted.

2. If you cannot mount the recovery disk in addition to the full public structure, you must dismount a non-system public disk. This disk must not contain any of the files required for the creation of the recovery disk or the actual recovery procedure. This disk can be dismounted while creating the recovery disk, and need not be mounted until a recovery is complete. If necessary, use PIP to copy files from this disk to another disk on the public structure:

   ```
   RUN $PIP.SAV<cr>
   *out:*.*=in:file.ext<cr>
   *in:file.ext/DE<cr>
   *^Z<cr>
   ```

   In these commands, in: is the name and unit number of the disk to be cleared of files, out: is the name and unit number of any other public disk, and file.ext is a file to be moved. Repeat these commands to PIP to copy each file on in: necessary for building the recovery disk or for the recovery procedure itself.

RSTS/E VØ6C-Ø3 Seq 17.3.4 M
Automated Patching Facility Package
PBUILD Page 1 of 2

PBUILD DOES NOT HANDLE $END PROPERLY - MANDATORY PBUILD PATCH

PROBLEM:

PBUILD may not wait for the currently running program to finish if the last line of the PBUILD command file is the $END of a $FORCE.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - PBUILD.BAS=PBUILD.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3ABC
*G/Ø3ABC/I/D/V<cr>
6!              EDIT            : Ø3ABCD
*H/7!/V<cr>
7!              EDIT DATE       : 18-APR-78
*G/18-APR-78/-9C/16-FEB-79/V<cr>
7!              EDIT DATE       : 16-FEB-79
```

RSTS/E VØ6C-Ø3 Seq 17.3.4 M
Automated Patching Facility Package
PBUILD Page 2 of 2

```
*G/21!/V<cr>
21!     VER/ED          EDIT DATE       REASON
*AI<cr>
  !<tab>VØ6C/Ø3ABCD<tab>16-FEB-79<tab>FIX $FORCE/$END AT END OF FILE.<lf>
<esc>*V<cr>
  !     VØ6C/Ø3ABC      18-APR-78       CORRECT ERROR IN LOGICAL
*H/1Ø1Ø/AV<cr>
        \ I$="VØ6C-Ø3ABC"
*G/VØ6C-Ø3ABC/I/D/V<cr>
        \ I$="VØ6C-Ø3ABCD"
*H/1Ø8Ø<tab>/V<cr>
1Ø8Ø     TØ%=FNIND%()
*G/GO TO 1Ø8Ø/V<cr>
        \       GO TO 1Ø8Ø IF INSTR(1%,CØ$,PEND$)=1%
*I/ IF ((FNKBOD% AND FNKBW%)OR -1%)/V<cr>
        \       GO TO 1Ø8Ø IF ((FNKBOD% AND FNKBW%)OR -1%) IF INSTR(1%,CØ$,PEND$)=1%
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD PBUILD<cr>

Ready

COMPILE $PBUILD<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
RT-11 Emulator Package
PIP.SAV

Seq 22.13.9 M

ANSI MAGTAPE WILDCARD DIRECTORY LOOKUP FAILURE - MANDATORY PIP.SAV PATCH

PROBLEM:

When a wild card file specification is used in obtaining directory information for an ANSI magtape volume, PIP fails to find any files.

SOLUTION:

The following mandatory patch will correct this problem.

PROCEDURE:

1. This is a required patch to PIP.SAV.

2. The patch described in Step 4 below CANNOT be installed using the INIT PATCH option.

3. This patch must be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command File Name? <cr>     (RETURN for manual patch installation)
File to patch? [1,2]PIP.SAV
File found in account [1,2]
```

   The patch is also contained in a command file appearing in patch kit version "F" or later.

RSTS/E V06C-03
RT-11 Emulator Package
PIP.SAV

4. The patch is as follows:

```
Base address? 2176
Offset address? 14236
 Base   Offset  Old     New?
002176  014236  010367  ? 12700
002176  014240  161750  ? 412
002176  014242  001421  ? 10337
002176  014244  012700  ? 410
002176  014246  000412  ? BEQ+17
002176  014250  016705  ? ^C          (Up-arrow/C to exit)
Patch complete
1 patch installed
```

RPG II V8.02
for RSTS/E V6C
OTS V8.02S

Seq 32.3.16 M

THE "MR" INDICATOR IS IMPROPERLY ON - MANDATORY OTS PATCH (YL)

PROBLEM:

In an RPG program with more than one secondary file and matching fields, th "MR" indicator is turned on whenever the matching fields of the secondary file are matched even if no matched matching field is present in the primary file.

SOLUTION:

The patch detailed below corrects this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form RPGPAT.CMD. If the file is not available as assumed, you should replace al of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that th patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later If you do not have that distribution, you can produce a command file b specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/EXTSCT/V<cr>
EXTSCT=$$RPG0:506<cr>
*G/506/-2C/60/V<cr>
EXTSCT=$$RPG0:560<cr>
*H/V8.02S/V<cr>
; V8.02S -- OVERFLOW INDICATOR RESET FOR TOTAL TIME OUTPUT ONLY<cr>
*AV<cr>
GBLPAT=RMSOV:M.STRT+1330:240:240<cr>
*4AI<cr>
;<cr>
; V8.02T -- MATCHING RECORD<cr>
GBLPAT=RMSOV:M.STRT+652:4737:2000:504<cr>
GBLPAT=RMSOV:M.STRT+752:4737:2000:526:240<cr>
GBLPAT=RMSOV:M.STRT+772:4737:2000:544<cr>
GBLPAT=RMSOV:M.PAT+506:0:105767:177772:1403:112763:177777:311:62716<cr>
GBLPAT=RMSOV:M.PAT+526:2:207:105063:311:5063:240:105067:177740<cr>
GBLPAT=RMSOV:M.PAT+546:766:112767:177777:177730:757<cr>
<esc>*EX<cr>
```

RPG II V8.02 Seq 32.3.16 M
for RSTS/E V6C
OTS V8.02S 2 of 2

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02 Seq 32.3.17 M
for RSTS/E V6C
OTS V8.02T 1 of 2

UPDATE AFTER ADDING NEW RECORDS TO INDEXED FILE - MANDATORY OTS PATCH (YL)

PROBLEM:

During multi-file processing, RMS error 384 (No Current Record) occurs when an indexed file is updated after a new record has been added to that file.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library files (RPGLIB.OLB and RPGCOM.OLB) are located on the public disk structure in the system library account ($). If the files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "F" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXRDM.COR

```
            .TITLE  XXRDM -- RPG RANDOM FILE I/O
            .IDENT  /V8.01/ ;29-JAN-79 YL
            .MCALL  RABOF$,RAB$BT
            RABOF$  RMS$L
            RAB$BT  DFIN$L
            CB=%2
            F.KYPS=112
            F.KEYL=114
      $$BASE=.
      .     =$$BASE+512
            JSR     PC,$$BASE+772
      .     =$$BASE+772
            BISB    #RB$KEY,O$RAC(R5)       ;KEYED ACCESS
            MOVB    F.KEYL(CB),O$KSZ(R5)    ;KEY-LENGTH
            MOV     F.KYPS(CB),O$KBF(R5)    ;KEY-BUFFER
            ADD     O$RBF(R5),O$KBF(R5)     ;
      10$:  JSR     PC,RMSFIN               ;FIND A RECORD
            BCS     10$                     ;
            JSR     PC,RMSUPD               ;UPDATE A RECORD
            RTS     PC                      ;
            .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXRDM.PAT=LB:RMSMAC/ML,[your acct]XXRDM.COR
MAC>^Z                                          (CTRL/Z to exit)
```

RPG II V8.02 Seq 32.3.17 M
for RSTS/E V6C
OTS V8.02T 2 of 2

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXRDM.OLD=$RPGCOM/EX:XXRDM
LBR>^Z                                    (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXRDM=XXRDM.OLD/CS:152012,XXRDM.PAT/CS:017455
PAT>^Z                                    (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXRDM
LBR>^Z                                    (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
   for RSTS/E V6C
OTS V8.02T

Seq 32.3.18 M

'LOKUP' AN ARRAY - MANDATORY OTS PATCH (YL)

PROBLEM:

When using the 'LOKUP' operation to search an array without an index specified, the operation does not always search the array from the first element.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library files (RPGLIB.OLB and RPGCOM.OLB) are located on the public disk structure in the system library account ($). If the files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "F" or later. To apply the patch manually, perform the following RSTS/E system commands.

1a. Build the following correction file using an editor and name it: RCARY.COR

```
        .TITLE  R.CARY
        .IDENT  /V8.01/ ;5-FEB-79 YL
        CR=%3
        X.WORK=312
        X.WTMP=X.WORK+100
        X.WFUN=X.WTMP+2
        ENTLGH=176000
; THIS IS A TEMPORARY FIX. PERMANENT FIX SHOULD COME FROM RPG COMPILER.
$$BASE=.
.       =$$BASE+6
        JSR     PC,$$BASE+172
.       =$$BASE+172
        BIT     #140000,R0      ;NO SEQUENCE?
        BNE     10$             ;NO
        CLR     X.WFUN(CR)      ;CLEAR STARTING INDEX ADDR
10$:    BIC     #ENTLGH,R0      ;ISOLATE ARRAY ENTRY LENGTH
        RTS     PC
        .END
```

1b. Build the following correction file using an editor and name it: RALKX.COR

```
            .TITLE  R.ALKX
            .IDENT  /V8.00/ ;5-FEB-79 YL
            LK=%5
    $$BASE=.
    .       =$$BASE+4
            BEQ     ALKX2           ;NO
    .       =$$BASE+30
            BEQ     ALKX2           ;
            JSR     LK,R.BNAS       ;BINARY TO ASCII CONVERSION
    ALKX2:  RTS     LK
            .END
```

2. Assemble the correction files as follows:

```
RUN $MAC.TSK
MAC>RCARY.PAT=RCARY.COR
MAC>RALKX.PAT=RALKX.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original modules as follows:

```
RUN $LBR.TSK
LBR>RCARY.OLD=L:RPGLIB/EX:R.CARY
LBR>RALKX.OLD=L:RPGLIB/EX:R.ALKX
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old modules and corrections:

```
RUN $PAT.TSK
PAT>RCARY=RCARY.OLD/CS:031531,RCARY.PAT/CS:007235
PAT>RALKX=RALKX.OLD/CS:012314,RALKX.PAT/CS:007156
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched modules in the library:

```
RUN $LBR.TSK
LBR>$RPGLIB/RP=RCARY,RALKX
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V6C
OTS V8.02T

Seq 32.3.19 M

/TA: SWITCH IN RPGASN.DAT FILE - MANDATORY OTS PATCH (YL)

PROBLEM:

If the task name used together with the /TA: switch in the RPGASN.DAT file is less than 6 characters in length and the file extension (.TSK) is explicitly specified, the run time system fails to find the data file associated with the task.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library files (RPGLIB.OLB and RPGCOM.OLB) are located on the public disk structure in the system library account ($). If the files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "F" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXINI.COR

```
        .TITLE  XXINI -- RPG INIT  ASSIGNMENTS
        .IDENT  /V8.02/ ;20-FEB-79 YL
$$BASE=.
.       =$$BASE+310
        JSR     PC,PATCH
.       =$$BASE+1040
PATCH:  MOV     #6,R2
        MOV     #D.TAVL,R1      ;-> /TA:TASKNAME
36$:    CMPB    (R1)+,#'.       ;SEARCH FOR .
        BEQ     37$             ;FOUND
        SOB     R2,36$          ;
        BR      39$             ;NOT FOUND
37$:    DEC     R1              ;
38$:    CLRB    (R1)+           ;CLEAR .TSK
        SOB     R2,38$          ;
39$:    MOV     #6,R2           ;TASKNAME LENGTH
        RTS     PC              ;
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXINI.PAT=XXINI.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXINI.OLD=$RPGCOM/EX:XXINI
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXINI=XXINI.OLD/CS:053714,XXINI.PAT/CS:013164
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXINI
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

MAXIMUM LENGTH ARGUMENTS

MANDATORY PATCH (C.C.)

PROBLEM:

PUTCM subroutine allows only 87. bytes to be passed in the argument instead of 127.

SOLUTION:

Apply the following patch.

PATCH PROCEDURE:

Create the following command file for $PBUILD. Instructions for using $PBUILD are included in the RSTS/E V06C SYSTEM GENERATION MANUAL, AA-2669D-TC.

```
! DIBOL/DECFORM 4C
! Patch for PUTCM modules in both 4C and 4D libraries
! Allows 127. bytes instead of 87.
$FORCE
RUN $LBR.TSK
PUTCM.OLD=$DIBOL/EX:PUTCM
^Z
RUN $PIP.SAV
PUTCM.COR=KB:
        .TITLE  PUTCM
        .IDENT  /4.01/
        .CSECT  $PUTCM

$PC=.
.=$PC+22
        .WORD   177
.=$PC+52
        .WORD   460+177
        .END
^Z
^Z
RUN $MAC.TSK
PUTCM.PAT=PUTCM.COR
^Z
RUN $PAT.TSK
PUTCM.OBJ=PUTCM.OLD/CS:172005,PUTCM.PAT/CS:7233
^Z
RUN $LBR.TSK
$DIBOL/RP=PUTCM
^Z
RUN $PIP.SAV
PUTCM.COR,PUTCM.PAT,PUTCM.OLD,PUTCM.OBJ/DE
^Z
$END
```

"HANG" PROGRAM ON LINE PRINTER OFF-LINE - OPTIONAL DIBOL.RTS PATCH (ES)

PROBLEM:

If a DIBOL program is doing output directly to a line printer, and the printer goes off-line, the DIBOL V4C Run-Time System will return "ERROR 22 - IO ERROR" in response to the next output request. Subsequent requests for output may result in loss or duplication of data.

SOLUTION:

The following patch may OPTIONALLY be installed to prevent the duplication or loss of data under the above conditions. If this patch is installed and the line printer goes off-line, the DIBOL program will "hang," by continually attempting output until the printer is put back on-line or until the job is aborted. If the printer condition is corrected, the DIBOL program will continue execution without loss of output. No modifications to the DIBOL program are required.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DIBOL Run-Time System file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: [0,1]DIBOL.RTS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $ONLPAT
Command file name? [logfile=]
File to patch? [0,1]DIBOL.RTS
File found in account [0,1]
Base address? $INPT
Offset address? 4234
 Base   Offset  Old     New?
163604  004234  004767  ? 4737
163604  004236  000144  ? 140000
163604  004240  104004  ? 240
163604  004242  012762  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new base)
```

DIBOL-11/DECFORM V4C
   for RSTS/E V6C
DIBOL.RTS V4C-00

Seq 39.5.3 0
2 of 2

```
Base address? 140000
Offset address? 0
 Base   Offset  Old     New?
140000  000000  000000  ? 4737
140000  000002  000000  ? 170210
140000  000004  000000  ? 122762
140000  000006  000000  ? 6
140000  000010  000000  ? 14
140000  000012  000000  ? 1003
140000  000014  000000  ? 12737
140000  000016  000000  ? 4
140000  000020  000000  ? 456
140000  000022  000000  ? 104004
140000  000024  000000  ? 122737
140000  000026  000000  ? 16
140000  000030  000000  ? 402
140000  000032  000000  ? 1004
140000  000034  000000  ? 122762
140000  000036  000000  ? 6
140000  000040  000000  ? 14
140000  000042  000000  ? 1402
140000  000044  000000  ? 137
140000  000046  000000  ? 170046
140000  000050  000000  ? 10046
140000  000052  000000  ? 12700
140000  000054  000000  ? 442
140000  000056  000000  ? 12710
140000  000060  000000  ? 1
140000  000062  000000  ? 104010
140000  000064  000000  ? 12020
140000  000066  000000  ? 12710
140000  000070  000000  ? 140076
140000  000072  000000  ? 12600
140000  000074  000000  ? 752
140000  000076  000000  ? 0
140000  000100  000000  ? ^C                    (up-arrow/C to exit)
Patch complete
1 patch installed

Command file name? ^Z                          (CTRL/Z to exit)

Ready
```

3. The Run-Time System is ready for use. Your programs do not have to be re-task-built or re-compiled. The Run-Time System does have to be reloaded:

```
RUN $UTILTY
<UTILTY's header line>
#UNLOAD DIBOL
#EXIT

Ready
```

4. The command file and other files used during the patching procedures should now be removed from the public structure.

DIBOL-11/DECFORM V4C
for RSTS/E V6C
DIBOL.RTS V4C-00

Seq 39.5.4 M

OUT OF MEMORY ON REPEATED OPEN/CLOSE SEQUENCE - MANDATORY DIBOL.RTS PATCH (ES)

PROBLEM:

A DIBOL Error number 9 is generated when enough files are opened and then closed. Buffer space is allocated on the OPEN and then not relinquished when the file is CLOSE'd.

SOLUTION:

The patch detailed below corrects the problem and changes the version to DIBOL VC04-00A.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DIBOL Run-Time System file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: [0,1]DIBOL.RTS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $ONLPAT
Command file name? [logfile=]
File to patch? [0,1]DIBOL.RTS
File found in account [0,1]
Base address? $DEFEX
Offset address? 6757
 Base   Offset  Old     New?
140450  006757    040   ? 101
140450  006760    040   ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                              (CTRL/Z for new base)
Base address? $INPT
Offset address? 5662
 Base   Offset  Old     New?
163604  005662  004767  ? 4737
163604  005664  153710  ? 140100
163604  005666  004767  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                              (CTRL/Z for new base)
```

DIBOL-11/DECFORM V4C
   for RSTS/E V6C
DIBOL.RTS V4C-00

Seq 39.5.4 M

2 of 2

```
Base address? 140000
Offset address? 100
 Base   Offset  Old     New?
140000  000100  000000  ? 6301
140000  000102  000000  ? 137
140000  000104  000000  ? 145402
140000  000106  000000  ? ^C                    (up-arrow/C to exit)
Patch complete
1 patch installed

Command file name? ^Z                          (CTRL/Z to exit)

Ready
```

3. The Run-Time System is ready for use. Your programs do not have to be re-task-built or re-compiled. The Run-Time System does have to be reloaded:

```
RUN $UTILTY
<UTILTY's header line>
#UNLOAD DIBOL
#EXIT

Ready
```

4. The command file and other files used during the patching procedures should now be removed from the public structure.

DIBOL-11/DECFORM V4C
for RSTS/E V6C
DIBOL.RTS V4C-00A

Seq 39.5.5 M

CHANNEL IN USE ERROR - MANDATORY DIBOL.RTS PATCH (ES)

PROBLEM:

When a DIBOL program attempts to execute an OPEN statement with an illegal file specification (e.g. "FIL.EXT.UH"), Error #17 "Bad File Specification" is generated correctly; but subsequent OPEN statements on that channel will fail with Error #16 "DIBOL Channel In Use."

SOLUTION:

The patch detailed below corrects this problem and changes the version to DIBOL VC04-00B.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DIBOL Run-Time System file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: [0,1]DIBOL.RTS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $ONLPAT
Command file name? [logfile=]
File to patch? [0,1]DIBOL.RTS
File found in account [0,1]
Base address? $DEFEX
Offset address? 6757
 Base   Offset  Old     New?
140450  006757     101  ? 102
140450  006760     040  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new base)
Base address? $INPT
Offset address? 510
 Base   Offset  Old     New?
163604  000510  004767  ? 4737
163604  000512  005264  ? 140106
163604  000514  010466  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new base)
```

DIBOL-11/DECFORM V4C
   for RSTS/E V6C
DIBOL.RTS V4C-00A

Seq 39.5.5 M
2 of 2

```
Base address? 140000
Offset address? 106
 Base   Offset  Old     New?
140000  000106  000000  ? 5002
140000  000110  000000  ? 4737
140000  000112  000000  ? 174124
140000  000114  000000  ? 137
140000  000116  000000  ? 171604
140000  000120  000000  ? ^C                    (up-arrow/C to exit)
Patch complete
1 patch installed

Command file name? ^Z                          (CTRL/Z to exit)

Ready
```

3. The Run-Time System is ready for use. Your programs do not have to be re-task-built or re-compiled. The Run-Time System does have to be reloaded:

```
RUN $UTILTY
<UTILTY's header line>
#UNLOAD DIBOL
#EXIT

Ready
```

4. The command file and other files used during the patching procedures should now be removed from the public structure.

DIBOL-11/DECFORM V4C
for RSTS/E V6C
DIBOL.RTS V4C-00B

Seq 39.5.6 M

1 of 2

ERROR 67 AFTER DETACH - MANDATORY DIBOL.RTS PATCH (ES)

PROBLEM:

A DETACH statement executed immediately after an XCALL to TNMBR can cause Error 67 "RSTSE Error #18 Illegal SYS Usage."

SOLUTION:

The patch detailed below corrects this problem and changes the version to DIBOL VC04-00C.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DIBOL Run-Time System file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: [0,1]DIBOL.RTS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $ONLPAT
Command file name? [logfile=]
File to patch? [0,1]DIBOL.RTS
File found in account [0,1]
Base address? $DEFEX
Offset address? 6757
 Base   Offset  Old     New?
140450  006757     102  ? 103
140450  006760     040  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new base)
Base address? $INPT
Offset address? 6274
 Base   Offset  Old     New?
163604  006274  012700  ? 4737
163604  006276  000406  ? 140120
163604  006300  112710  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new base)
```

DIBOL-11/DECFORM V4C
   for RSTS/E V6C
DIBOL.RTS V4C-00B

Seq 39.5.6 M

2 of 2

```
Base address? 140000
Offset address? 120
 Base   Offset  Old     New?
140000  000120  000000  ? 4737
140000  000122  000000  ? 172760
140000  000124  000000  ? 12700
140000  000126  000000  ? 406
140000  000130  000000  ? 207
140000  000132  000000  ? ^C                    (up-arrow/C to exit)
Patch complete
1 patch installed

Command file name? ^Z                          (CTRL/Z to exit)

Ready
```

3. The Run-Time System is ready for use. Your programs do not have to be re-task-built or re-compiled. The Run-Time System does have to be reloaded:

```
RUN $UTILTY
<UTILTY's header line>
#UNLOAD DIBOL
#EXIT

Ready
```

4. The command file and other files used during the patching procedures should now be removed from the public structure.

DATATRIEVE-11 V1.1
for RSTS/E V6C
DTR

Seq 42.2.5 M

1 of 1

ERROR IN THE DTR CODE (SPR 11-21831 JS)

STATEMENT

DATATRIEVE-11 will delete the last protection element of a dictionary item if requested.

RESPONSE

There is an error in the DTR code which checks for deletion of last protection element. To repair your dictionary, try this:

```
DEFINE RECORD DICT-REC
       Ø1 ITEM
       Ø3 NAME PIC X(3Ø).
       Ø3 FILLER PIC X(452).;
DEFINE DOMAIN DICT USING DICT-REC
       ON [1,2] QUERY.DIC;
READY DICT SHARED WRITE
ERASE ALL OF DICT WITH NAME=
       "BAD-ELEMENT"
```

COBOL-11 V4.Ø
for RSTS/E V6C
COMPILER PATCH

CORRECTION TO RESTORE CORRECT FUNCTION TO /-BOU SWITCH

PROBLEM:

Application of /-BOU switch causes programs to work incorrectly where indexing is involved.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it PDSR.PAT

```
                .TITLE  PDSR
                .PSECT  PDSR,OVR,REL
                .IDENT  /1A.132A/

CBLTCD  =007234
MOVCOD  =014624
CBLP    =BEGIN + 023024
MOVSS   =015126
DDDD2   =015062
PATARA  =026020
FL.CON  =000000
C.MOV2  =012703
C.TEST  =005723
C.ADD4  =061337
C.ADD5  =062737

BEGIN:

                .= BEGIN + CBLTCD + 6
                JSR     R5,     PATCH1

                .= BEGIN + MOVCOD + 10
                JSR     R5,     PATCH2

                .= BEGIN + MOVCOD + 30
                .WORD C.ADD5
```

```
                .= BEGIN + MOVCOD + 42
                JSR     R5,     PATCH3

                .= BEGIN + PATARA

PATCH1: ASR     CBLP
        BNE     Ø1$
        MOV     (SP)+,  R5
Ø1$:    RTS     R5

PATCH2: MOV     #C.MOV2, (R3)+
        MOVB    #FL.CON, (R4)+
        JSR     R5, BEGIN + MOVSS
        MOV     #C.TEST, (R3)+
        MOVB    #FL.CON, (R4)+
        MOV     #C.ADD4, (R3)+
        MOVB    #FL.CON, (R4)+
        JSR     R5, BEGIN + DDDD2
        RTS     R5

PATCH3: MOVB    #FL.CON, (R4)+
        JSR     R5, BEGIN + DDDD2
        RTS     R5

        .END
```

3. Extract the original module from CBLLIB.OLB

```
RUN $LBR
LBR>PDSR.OLD=CBLLIB/EX:PDSR
LBR>^Z                          (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>PDSR.POB,PDSR/-SP=PDSR.PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>PDSR.OBJ=PDSR.OLD/CS:Ø72351,PDSR.POB/CS:26253
PAT>^Z                          (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>CBLLIB/RP=PDSR
LBR>^Z                          (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V6C
COMPILER

SYNCHRONIZATION PROBLEMS

PROBLEM:

This patch corrects a problem in the data allocation algorithm for implicit filler characters.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it PHS2.PAT

```
        .TITLE  PHS2
        .PSECT  PHS2,OVR
        .IDENT  /1A.59A/
        XYSYNC = 200
        XXSYNC = 002
BEGIN:  .=.+4364
        .WORD   240,240,240,240,240,240,240,240

        .=BEGIN+4426

TOPACH:         JMP     @#BEGIN + 20462
        NOP
        NOP
        .=BEGIN + 20462

PATCH:  CMPB    @#BEGIN + 1450, @#BEGIN + 2174
        BGE     01$
        JMP     @#BEGIN + 4436
01$:    JSR     R5,     @#BEGIN + 10142
        BIT     #XYSYNC,        @#BEGIN + 1434
        BNE     02$
        BIC     #<XXSYNC ! XYSYNC>,@#BEGIN + 1434
02$:    JMP     @#BEGIN + 4360
        .END
```

3. Extract the original module from CBLLIB.OLB

```
RUN $LBR
LBR>PHS2.OLD=CBLLIB/EX:PHS2
LBR>^Z                          (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>PHS2.POB,PHS2/-SP=PHS2.PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>PHS2.OBJ=PHS2.OLD/CS:54634,PHS2.POB/CS:20023
PAT>^Z                          (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>CBLLIB/RP=PHS2
LBR>^Z                          (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.0.

COBOL-11 V4.Ø
for RSTS/E V6C
COMPILER

Seq 43.2.3 M

1 of 3

INVALID RESULTS FROM COMPUTE

PROBLEM:

The compute verb will occasionally generate incorrect results for complex expressions.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it WLKT.PAT

```
        .TITLE  WLKT
        .IDENT  /1A.68A/
        .PSECT  WLKT,OVR

BEGIN:
        .=BEGIN+1546
        JMP     PATCH1
RETURN:
        .=BEGIN+1636
        INCB    T1
        .WORD   240,240,240,240

        .=BEGIN+1762
        INCB    T2
        .WORD   240,240,240,240

        .=BEGIN+2066
        JSR     R5,PATCH2
        .WORD   240

        .=BEGIN+2272
        INCB    T1
        .WORD   240,240,240,240

        .=BEGIN+2440
        INCB    T2
```

```
            .WORD   240,240,240,240

            .=BEGIN+2546
            JSR     R5,PATCH3
            .WORD   240,240,240,240,240

            .=BEGIN+3244
    PATCH1:
            CLRB    T1
            CLRB    T2
            MOVB    @#BEGIN+256,-(SP)
            JMP     RETURN

    PATCH2:
            JSR     R5,PATCH4
            BICB    #160,@#BEGIN+264
            RTS     R5

    PATCH3:
            JSR     R5,CGBOOL
            BEGIN+344
            BEGIN+346
            BEGIN+562
            BEGIN+1004
            BEGIN+1006
            JSR     R5,PATCH4
            RTS     R5

    PATCH4:
            TSTB    T1
            BEQ     1$
            MOVB    @#BEGIN+307,R0
            BIC     #177400,R0
            JSR     R5,FRETMP
            CLRB    T1
    1$:     TSTB    T2
            BEQ     2$
            MOVB    @#BEGIN+331,R0
            BIC     #177400,R0
            JSR     R5,FRETMP
            CLRB    T2
    2$:     RTS     R5

    T1:     .BYTE   0
    T2:     .BYTE   0

            .END
```

3. Extract the original module from CBLLIB.OLB

```
RUN $LBR
LBR>WLKT,OLD=CBLLIB/EX:WLKT
LBR>^Z                          (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>WLKT,POB,WLKT/-SP=WLKT,PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>WLKT,OBJ=WLKT,OLD/CS:44422,WLKT,POB/CS:53404
PAT>^Z                          (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>CBLLIB/RP=WLKT
LBR>^Z                          (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V6C
COMPILER PATCH

Seq 43.2.4 M

1 of 2

INITIALIZATION PROBLEM ON COMP-3 ITEMS

PROBLEM:

Value clauses for data items with a COMP-3 usage initialize that item with an incorrect value.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it PHS2.PAT

```
        .TITLE  PHS2
        .IDENT  /1A.598/
        .PSECT  PHS2,OVR

BEGIN:
        .=BEGIN+16554
        JMP     PATCH
RETURN:

        .=BEGIN+16632
        .WORD   240,240,240,240,240,240,240

        .=BEGIN+20524
PATCH:
        MOV     R2,-(SP)
        MOV     R2,R4
        NEG     R2
        JMP     RETURN

        .END
```

3. Extract the original module from CBLLIB.OLB

```
RUN $LBR
LBR>PHS2.OLD=CBLLIB/EX:PHS2
LBR>^Z                          (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>PHS2.POB,PHS2/-SP=PHS2.PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>PHS2.OBJ=PHS2.OLD/CS:70126,PHS2.POB/CS:13440
PAT>^Z                          (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>CBLLIB/RP=PHS2
LBR>^Z                          (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.0.

COBOL-11 V4.Ø
for RSTS/E V6C
OTS

Seq 43.9.1 M

1 of 2

MANDATORY PATCH FOR COBOL INTERACTIVE DEBUGGER

PROBLEM:

The COBOL debugger generates and deposits random values when the DEPOSIT command is used with numeric data

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it GENB4.PAT

```
        .TITLE  GENB4
        .PSECT  $GENB4, RO,I,GBL,REL,OVR
        .IDENT  /1A.Ø7/

.=.+116
        MOV     #$COBWK+16, R4
        .END
```

3. Extract the original module from COBLIB.OLB

```
RUN $LBR
LBR>GENB4.OLD=[1,1]COBLIB/EX:GENB4
LBR>^Z                          (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>GENB4.POB,GENB4/-SP=GENB4.PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>GEN84.OBJ=GEN84.OLD/CS:142326,GEN84.POB/CS:10533
PAT>^Z                          (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>[1,1]COBLIB/RP=GEN84
LBR>[1,1]COBOVR/RP=GEN84
LBR>^Z                          (control/z to exit)
```

7. Re-TASK-BUILD any programs that have this problem using the patched OTS

COBOL-11 V4.Ø
for RSTS/E V6C
OTS

MANDATORY PATCH FOR DIVIDE AND COMPUTE

The divide routine used the by DIVIDE and COMPUTE verbs occasionally give the wrong answer

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it DIV.PAT

```
        .TITLE  DIV
        .PSECT  $DIV,RO,OVR
        .IDENT  /1A.03A/
$START=.
.=$START+1514
        BHI     $START + 1534
.END
```

3. Extract the original module from COBLIB.OLB

```
RUN $LBR
LBR>DIV.OLD=[1,1]COBLIB/EX:DIV
LBR>^Z                          (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>DIV.POB,DIV/-SP=DIV.PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>DIV,OBJ=DIV,OLD/CS:57632,DIV,POB/CS:6004
PAT>^Z                          (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>[1,1]COBLIB/RP=DIV
LBR>[1,1]COBOVR/RP=DIV
LBR>^Z                          (control/z to exit)
```

7. Re-TASK-BUILD any programs that have this problem using the patched OTS

COBOL-11 V4.Ø
for RSTS/E V6C
OTS

MANDATORY PATCH FOR BINARY SIZE ERROR

PROBLEM:

When the ON SIZE ERROR phrase is used with certain arithmetic operations, the result may be incorrect

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it BINSER.PAT

```
        .TITLE  BINSER
        .IDENT  /1A.06/
$START=.
.=$START + 52

        JSR     PC, $PATCH

.PSECT PATCH
$PATCH:
        MOVB    5(R3),R0
        CLC
        RTS     PC
        .END
```

3. Extract the original module from COBLIB.OLB

```
RUN $LBR
LBR>BINSER.OLD=[1,1]COBLIB/EX:BINSER
LBR>^Z                          (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>BINSER.POB,BINSER/-SP=BINSER.PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>BINSER.OBJ=BINSER.OLD/CS:135453,BINSER.POB/CS:6607
PAT>^Z                          (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>[1,1]COBLIB/RP=BINSER
LBR>[1,1]COBOVR/RP=BINSER
LBR>^Z                          (control/z to exit)
```

7. Re-TASK-BUILD any programs that have this problem using the patched OTS

COBOL-11 V4
for RSTS/E V6C
OTS

Seq 43.9.4 M

MANDATORY PATCH FOR UNSTRING

PROBLEM:

The UNSTRING WITH POINTER command loses its pointer in large programs

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it STRING.PAT

```
        .TITLE  STRING
        .IDENT  /1A.13/
        .PSECT  $STRNG,RO,I,GBL,REL,OVR
$START=.
.=$START + 56
        BNE     .+50
        .END
```

3. Extract the original module from COBLIB.OLB

```
RUN $LBR
LBR>STRING.OLD=[1,1]COBLIB/EX:STRING
LBR>^Z                          (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>STRING.POB,STRING/-SP=STRING.PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>STRING.OBJ=STRING,OLD/CS:155737,STRING,POB/CS:7100
PAT>^Z                          (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>[1,1]COBLIB/RP=STRING
LBR>[1,1]COBOVR/RP=STRING
LBR>^Z                          (control/z to exit)
```

7. Re-TASK-BUILD any programs that have this problem using the patched OTS

COBOL-11 V4.Ø
for RSTS/E V6C
OTS

PERFORMANCE INCREASE - RELATIVE FILES

PROBLEM:

When this optional patch is applied, a performance increase will occur for all reads on relative files.

SOLUTION:

Install the optional patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it RRERR.PAT

```
        .TITLE  RRERR
        .IDENT  /1A.Ø1A/
        .PSECT  $CRERR,GBL,I,RO,REL,OVR

BEGIN:
        .=BEGIN+2Ø
        .WORD   415
        .END
```

3. Extract the original module from COBLIB.OLD

```
RUN $LBR
LBR>RRERR.OLD=[1,1]COBLIB/EX:RRERR
LBR>^Z                          (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>RRERR.POB,RRERR/-SP=RRERR.PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>RRERR.OBJ=RRERR.OLD/CS:70556,RRERR.POB/CS:4747
PAT>^Z                          (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>[1,1]COBLIB/RP=RRERR
LBR>[1,1]COBOVR/RP=RRERR
LBR>^Z                          (control/z to exit)
```

7. To take advantage of these patches, you must re-task build your COBOL program.

PERFORMANCE INCREASE - INDEXED FILES

PROBLEM:

When reading an indexed file, some unnecessary overhead is imposed which can affect performance. Applying this patch will provide performance increase when reading indexed files.

SOLUTION:

The following patch should be applied if your installation accesses indexed files.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it IREIR.PAT

```
        .TITLE  IREIR
        .IDENT  /1A.02A/
        .PSECT  $CREIR,GBL,I,RO,REL,OVR

BEGIN:
        .=BEGIN+54
        .WORD   415
        .END
```

3. Extract the original module from COBLIB.OLB

```
RUN $LBR
LBR>IREIR.OLD=[1,1]COBLIB/EX:IREIR
LBR>^Z                          (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>IREIR.PUR,IREIR/-SP=IREIR.PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>IREIR.OBJ=IREIR.OLD/CS:72642,IREIR.POB/CS:5237
PAT>^Z                          (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>[1,1]COBLIB/RP=IREIR
LBR>[1,1]COBOVR/RP=IREIR
LBR>^Z                          (control/z to exit)
```

7. To take advantage of this patch, you must re-task build your COBOL programs.

COBOL-11 V4.Ø
for RSTS/E V6C
OTS
COBOL INTERACTIVE DEBUGGER

MANDATORY PATCH FOR CID ABORT

PROBLEM:

COBOL programs that are linked with the COBOL INTERACTIVE DEBUGGER terminate immediately on invocation without any error message

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to a privileged account other than [1,1].

2. Build the following correction file and name it CID.PAT

```
        .TITLE  CID
        .PSECT  $COD
        .IDENT  /1A.05/

$START=.
.=$START + 424
        BICB    #1, 272(R4)
.=$START + 446
        MOV     #46, R3
.=$START + 466
        BISB    #1, 272(R4)
.=$START + 606
        ADD     #2, R4
.=$START + 616
        MOV     #$COBWK + 46, R2
.=$START + 764
        MOV     #$COBWK + 46, R3
.=$START + 1110
        MOV     #$COBWK + 46, R0
.=$START + 1166
        MOV     #$COBWK + 47, R2
.=$START + 3304
        BISB    #1, 272(R4)

        .TITLE  XRUN
        .PSECT  $XRUN, I, RO, GBL, REL, OVR
```

```
        .IDENT  /1A.10/

$START = .
.=$START + 114
        MOV     #$COBWK + 254, R0
.=$START + 242
        MOV     #$COBWK + 46, R0
.=$START + 250
        ADD     270(R4), R1
.=$START + 1032
        JSR     PC, $P1XRN
.=$START + 1064
        MOV     #$COBWK + 252, R4

.=$START + 1110

$P1XRN:
        JSR PC, $START + 76
        MOV     R4, -(SP)
        MOV     #$COBWK + 420, R4
        TST     4(R4)
         BNE    1$
        MOV     (SP)+, R4
        RTS     PC

1$:     MOV     R3, -(SP)
        MOV     (R4)+, -(SP)
        MOV     (R4)+, -(SP)
        MOV     (R4)+, -(SP)
        MOV     (R4)+, R3
        MOV     #$COBWK, -(SP)
        ADD     #252, (SP)
        MOV     #0, @(SP)+
        .GLOBL  $IOUTL
        JSR     PC, $IOUTL
        .WORD   20
        .WORD   .+2
        MOV     (SP)+, R3
        MOV     (SP)+, R4
        RTS     PC
.END
```

3. Copy the file CID.OBJ from the system library account and rename it CID.OLD.

4. Assemble the correction file.

```
RUN $MAC
MAC>CID.POB,CID/-SP=CID.PAT
MAC>^Z                          (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>CID.OBJ=CID.OLD/CS:36446,CID.POB/CS:51626
PAT>^Z                          (control/z to exit)
```

6. Copy the patched object file back to the system library account.

7. Re-TASK-BUILD any programs that use CID.

digital

Software Product Description

PRODUCT NAME: DECAL, Version 2.0 **SPD 15.86.5**

Digital Equipment CAI Author Language System

DESCRIPTION:

DECAL, Digital Equipment CAI Author Language System, is the Computer Assisted Instruction (CAI) lesson authoring system. It is designed to enable teachers with no previous computer experience to provide individualized instruction for students. Written in BASIC-PLUS, the language of DIGITAL's Resource Sharing Timesharing System/Extended (RSTS/E), DECAL is suitable for use in any subject area and at all grade levels.

DECAL lessons can present textual material to a student, provide additional help at the student's request, anticipate and respond to both correct and incorrect responses, and dynamically determine sequences based upon those responses to individual lesson sections. Lessons can be up to 50 segments (questions) in length and can be linked with other lessons to form courses and be shared among schools. Students can leave a DECAL lesson at any point in the lesson, and later return to the lesson at the point where they left off. These features enable instructors to create effective lessons in the area of:

- drill and practice
- tutorials
- quizzes and tests
- dialog/inquiry sessions
- simulation and games
- problem solving

DECAL lessons are interactive and can provide "HELP" messages for all questions requiring a response from the instructor or student. The DECAL system includes provisions for administering, creating, and editing lessons; gathering and reporting lesson and individual student comments and statistics; and, at the discretion of the instructor, limiting and maintaining access to lessons via student directories.

Statistics are collected and stored automatically. Statistics included are the mean, variance, and standard deviation of student scores; summary of answer selections; response time statistics; the names, execution times, and execution dates of lessons and student comments; and summaries of failed questions. The programs are modular and enable the instructor to obtain reports on particular lessons, questions, or students.

Appropriately configured RSTS/E DECAL systems can handle up to 254 instructor accounts, and record statistics for up to 10,000 students.

MINIMUM HARDWARE REQUIRED:

Any valid RSTS/E configuration.

OPTIONAL HARDWARE:

Supports any device supported by the prerequisite software.

PREREQUISITE SOFTWARE:

RSTS/E Resource Sharing Timesharing System, V06A or later.

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

B — Software Support will be provided as stated in the Software Support Categories Addendum to this SPD.

UPDATE POLICY:

Software Updates, if any, released by DIGITAL during the one (1) year period following installation, will be provided to the customer for a media charge (includes no installation). After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

ORDERING INFORMATION:

All binary licensed software, including any subsequent updates, is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions of Sale, which provide in part that the software and any part thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the software) only for use on such CPU. All source licensed software is furnished only under the terms and conditions of a separate Software Program Sources License Agreement between Purchaser and DIGITAL.

The following key (D, E, Q, T, V) represents the distribution media for the product and must be specified at the end of the order number, e.g., QPE10-XD = sources on 9-track magnetic tape.

D = 9-track Magnetic Tape
E = RK05 Disk Cartridge
Q = RL01 Disk Cartridge
T = RK06 Disk Cartridge
V = RK07 Disk Cartridge

QPE10 -X— Single-use license, source license, sources, documentation, support services (media: D, E, Q, T, V)

ADDITIONAL SERVICES:
None

RSTS/E V6C
CUMULATIVE INDEX
APRIL 1979

This is a complete listing of all articles for RSTS/E V6C and layered products. **Missing sequence numbers may pertain to problems unique to other versions of the same product or other major operating systems.**

IMPORTANT!

The following numerical system has been grouped in logical order denoted by the first digit (X.X.X). The second digit (X.X.X.) refers to the subcomponent and the third digit (X.X.X) denotes the issue number or sequential order.

Retracted articles are indicated: RETRACTION.

Flags are currently being installed for all articles. The flags and definitions are as follows.

M = Mandatory patch. These are critical patches which each customer is required to install.

O = Optional patch. These articles are applicable only if the reported problems have occurred at th customer site or if they are unique to his operation.

R = Restriction. These problems are not patchable in released software. Restrictions are reviewed and corrected when possible as part of the normal release cycle.

N = Note. This information may be helpful to the user.

* = Articles appeared in RSTS/E Release Notes, December 1977 (AA-5246B-TC).

+ = Articles appeared in RSTS/E Software Dispatch Review, January 1978 (AA-5514B-TC).

** = Articles appeared in CTS-500 DIBOL-11 Release Notes June 1978 (AA-55048-TC)

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Component	Sequence	Mon/Yr
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PROBLEM WITH ISAM READS	26.5.25 M	Jul 78
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PROBLEM FOLLOWING OPEN WITH ILLEGAL FILENAME	26.5.28 M	Nov 78
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Component	Sequence	Mon/Yr
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HANG ON EXIT	26.6.11 M	May 78
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EOF AFTER CHANGED RECORD	26.6.13 M	May 78
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ISMUTL		
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CHANNEL IN USE ERROR IN REORG	26.7.3 M+	Jan 78
ISMUTL RECORD LENGTH PROBLEM	26.7.4 M+	Jan 78
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ISMUTL FAILS ON TERMINATOR CHARACTERS IN THE KEY	26.7.6 R	Jun 78
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BASIC-PLUS-2

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POSSIBLE FATAL ERRORS ON "PRINT-USING" STATEMENTS	27.2.2 M*	Dec 77
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POST MORTEM DUMP OPTION ALWAYS ENABLED ON "TSK" OUTPUT	27.2.5 O*	Dec 77
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POSSIBLE UNIBUS TIMEOUT FATAL ERRORS ON PRINT-USINGS	27.3.2 M*	Dec 77
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CHAINING TO A BASIC-PLUS PROGRAM FROM BASIC-PLUS-2 MAY RESULT IN SCALE FACTOR INTERLOCK	27.3.4 M*	Dec 77
ERROR TRAPPING OUT OF STRING FUNCTION GIVES MEMORY MANAGEMENT VIOLATION	27.3.5 M*	Dec 77
LARGE TERMINAL WIDTHS PRODUCE FATAL ERRORS	27.3.6 M*	Dec 77
DEBUG MAY IGNORE BREAK IN USER FUNCTION	27.3.7 M*	Dec 77
AN ATTEMPT TO USE A SUBSCRIPT OUT OF RANGE IN DEBUG WILL GIVE MEMORY MANAGEMENT ERRORS	27.3.8 M*	Dec 77
UNQUOTED STRINGS OR "&" AT END OF DATA STATEMENTS CAUSE READ ERRORS	27.3.9 M*	Dec 77
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ILLEGAL FILENAME MAY NOT GIVE ERROR	27.3.11 M*	Dec 77
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PRINT USING IGNORES TRAILING ASTERISK	27.3.13 M	Jan 78
PRINT USING RETURNS ERROR INDICATOR FOR NEGATIVE NUMBERS	27.3.14 M	Jan 78
AN OPEN OF THE TERMINAL IGNORES ACTUAL WIDTH	27.3.15 M	Jan 78
VAL FUNCTION IGNORES SCALE FACTOR	27.3.16 M	Jan 78
NUM$ WITH SCALING CAUSES MEMORY ERRORS	27.3.17 M	Jan 78
RND DOES NOT RETURN TRULY RANDOM NUMBERS	27.3.18 O	Jan 78
INTEGER EXPONENTIATE MAY GIVE OVERFLOW ERROR	27.3.19 O	Feb 78
USE OF MODE A% CLAUSE IN OPEN CHANGES VALUE OF A%	27.3.20 M	Feb 78
FILE STRING SCAN (SYS(-10)) REPORTS ERRORS INCORRECTLY	27.3.21 M	Feb 78
RMS OPENS WITH SCALING MAY CAUSE ERRORS	27.3.22 M	Feb 78
INTEGER ARGUMENTS MAY GIVE MEMORY ERRORS	27.3.23 M	Feb 78
'E' FORMAT WITH SCALING INPUTTED ERRONEOUSLY	27.3.24 M	Feb 78
CHAIN DROPS PRIVILEGES	27.3.25 M	Feb 78
ALLOWING 24 HOUR TIME OPTION	27.3.26 O	Mar 78
SCALED ARITHMETIC LOSES ACCURACY	27.3.27 M	Mar 78
CERTAIN UNTRAPPABLE ERRORS SHOULD NOT BE	27.3.28 M	Mar 78
SINGLE ALPHA CHARACTERS WRONGLY ACCEPTED AS NUMERIC	27.3.29 M	May 78
UNASSIGNED	27.3.30	XXX XX
NUM1$(SINGLE PRECISION) MAY GIVE STRANGE RESULTS	27.3.31 M	May 78
CHANNEL 15 NOT CLOSED ON ATTACH SYS CALL	27.3.32 M	May 78
XLATE FUNCTION DOES NOT WORK PROPERL`Y	27.3.33 M	Aug 78
RANDOMIZE DOES NOT WORK PROPERLY	27.3.34 M	Aug 78
THE THREAD MA1$ IS NOT IN THE RUN TIME SYSTEM	27.3.35 M	Aug 78
SIGN FUNCTION (SGN) NOT RETURNING CORRECT VALUES	27.3.36 M	Aug 78

Component	Sequence	Mon/Yr
BP2COM RUN-TIME SYSTEM PATCHES		
USE OF BP2COM RTS MAY GIVE TASK BUILDER ERRORS	27.4.1 M*	Dec 77
POSSIBLE UNIBUS TIMEOUT FATAL ERRORS ON STRING EQUATES	27.4.2 M*	Dec 77
ERROR TRAPPING OUT OF STRING FUNCTION GIVES MEMORY MANAGEMENT VIOLATION	27.4.3 M*	Dec 77
DEVICE "TI:" NOT PROPERLY HANDLED	27.4.4 M*	Dec 77
CHANGING PROMPT FOR BP2COM WHEN DEFAULT RUN-TIME SYSTEM	27.4.5 O	Dec 77
CHAINING TO A BASIC-PLUS PROGRAM FROM BASIC-PLUS-2 MAY RESULT IN SCALE FACTOR INTERLOCK	27.4.6 M*	Dec 77
ILLEGAL FILENAME MAY NOT GIVE ERROR	27.4.7 M	Jan 78
BP2COM FAILS TO CHAIN TO INIT AT START-UP	27.4.8 O	Jan 78
STACK OVERFLOW ERRORS WHEN BP2COM IS DEFAULT RTS	27.4.9 M	Mar 78
CONTROL C OUT OF BP2COM GIVES ERRORS	27.4.11 M	Oct 78
SYSTEM SECURITY EXPOSURE WITH BASIC-2-PLUS KEYBOARD MONITOR	27.4.12 M	Nov 78
BASIC2 OBJECT LIBRARY PATCHES		
DEBUG MAY IGNORE BREAK IN USER FUNCTION	27.5.1 M*	Dec 77
AN ATTEMPT TO USE A SUBSCRIPT OUT OF RANGE IN DEBUG WILL GIVE MEMORY MANAGEMENT ERRORS	27.5.2 M*	Dec 77
MEMORY MANAGEMENT VIOLATION ON MATRIX INVERSION	27.5.3 M	Jan 78
KEYED GETS WITH STRING EXPRESSIONS GIVE ERRORS	27.5.4 M	Mar 78
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THE THREAD MA1$ IS NOT IN THE RUN TIME SYSTEM	27.5.6 M	Aug 78
UPDATE DOES NOT CORRECTLY SET RECORDSIZE	27.5.7 M	Oct 78
BP2COM OBJECT LIBRARY PATCHES		
POSSIBLE UNIBUS TIMEOUT FATAL ERRORS ON STRING EQUATES	27.6.1 M*	Dec 77
POSSIBLE UNIBUS TIMEOUT FATAL ERRORS ON PRINT-USINGS	27.6.2 M*	Dec 77
CLOSING A WRITE LOCKED OR HUNG DEVICE RESULTS IN A LOOP	27.6.3 M*	Dec 77
ERROR TRAPPING OUT OF STRING FUNCTION GIVES MEMORY MANAGEMENT VIOLATION	27.6.4 M*	Dec 77
LARGE TERMINAL WIDTHS PRODUCE FATAL ERRORS	27.6.5 M*	Dec 77
DEBUG MAY IGNORE BREAK IN USER FUNCTION	27.6.6 M	Jan 78
AN ATTEMPT TO USE A SUBSCRIPT OUT OF RANGE IN DEBUG WILL GIVE MEMORY MANAGEMENT ERRORS	27.6.7 M	Jan 78
UNQUOTED STRINGS OR "&" AT END OF DATA STATEMENTS CAUSE READ ERRORS	27.6.8 M	Jan 78
POSSIBLE BAD DATA IF VIRTUAL ARRAY READ CAUSES ERROR	27.6.9 M	Jan 78
PRINT USING IGNORES TRAILING ASTERISK	27.6.10 M	Jan 78
MEMORY MANAGEMENT VIOLATION ON MATRIX INVERSION	27.6.11 M	Jan 78
PRINT USING RETURNS ERROR INDICATOR FOR NEGATIVE NUMBERS	27.6.12 M	Jan 78
AN OPEN OF THE TERMINAL IGNORES ACTUAL WIDTH	27.6.13 M	Jan 78
NUM$ WITH SCALING CAUSES MEMORY ERRORS	27.6.14 M	Jan 78
VAL FUNCTION IGNORES SCALE FACTOR	27.6.15 M	Jan 78
RND DOES NOT RETURN TRULY RANDOM NUMBERS	27.6.16 M	Feb 78
INTEGER EXPONENTIATE MAY GIVE OVERFLOW ERROR	27.6.17 M	Feb 78
USE OF MODE A% CLAUSE IN OPEN CHANGES VALUE OF A%	27.6.18 M	Feb 78
FILE STRING SCAN (SYS(-10)) REPORTS ERRORS INCORRECTLY	27.6.19 M	Feb 78
RMS OPENS WITH SCALING MAY CAUSE ERRORS	27.6.20 M	Feb 78
INTEGER ARGUMENTS MAY GIVE MEMORY ERRORS	27.6.21 M	Feb 78
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'E' FORMAT WITH SCALING INPUTTED ERRONEOUSLY	27.6.23 M	Feb 78
CHAIN DROPS PRIVILEGES	27.6.24 M	Feb 78
ALLOWING 24 HOUR TIME OPTION	27.6.25 O	Mar 78
SCALED ARITHMETIC LOSES ACCURACY	27.6.26 M	Mar 78
CERTAIN UNTRAPPABLE ERRORS SHOULD NOT BE	27.6.27 M	Mar 78
KEYED GETS WITH STRING EXPRESSIONS GIVE ERRORS	27.6.28 M	Mar 78
SINGLE ALPHA CHARACTERS WRONGLY ACCEPTED AS NUMERIC	27.6.29 M	May 78
UNASSIGNED	27.6.30	XXX XX
NUM1$(SINGLE PRECISION) MAY GIVE STRANGE RESULTS	27.6.31 M	May 78
CHANNEL 15 NOT CLOSED ON ATTACH SYS CALL	27.6.32 M	May 78
XLATE FUNCTION DOES NOT WORK PROPERLY	27.6.33 M	Aug 78
RANDOMIZE DOES NOT WORK PROPERLY	27.6.34 M	Aug 78
THE THREAD MA1$ IS NOT IN THE RUN TIME SYSTEM	27.6.35 M	Sep 78
SIGN FUNCTION (SGN) NOT RETURNING CORRECT VALUES	27.6.36 M	Aug 78
UPDATE DOES NOT CORRECTLY SET RECORDSIZE	27.6.37 M	Nov 78
BASRMS OBJECT LIBRARY PATCHES		
SCRATCH STATEMENT PRODUCES UNIBUS TIMEOUT ERRORS	27.7.1 M*	Dec 77
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SCQUENTIAL VARIABLE RECORDS WITH ODD LENGTHS CAUSE ERRORS	27.7.3 M	Jan 78

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PIP CANNOT PROCESS LISTING FILES	28.1.3 N+	Jan 78
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LUN ASSIGNMENTS FROM MACRO	28.1.8 N	May 78
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COMPILER		
ABORT WHEN READING 88 LEVEL ITEM	28.2.1 M	Feb 78
START WITH RELATIVE FILES	28.2.2 M	Feb 78
FINAL STATEMENT "EXIT PROGRAM"	28.2.3 R	Mar 78
ACCEPTING CBL PROG.CBL	28.2.4 R	Mar 78
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CALL STATEMENT MAY TERMINATE	28.2.10 N	Apr 78
UNSTRING STATEMENT	28.2.11 N	Apr 78
LARGE PROGRAM ABORTS WITH "SYSTEM ERROR 003"	28.2.12 R	Dec 78
INVALID ERROR MESSAGE IS GENERATED BY THE COMPILER	28.2.13 N	Dec 78
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IMPROPER TEST OF SIGNED SUBORDINATE DATA ITEM	28.3.2 M	Feb 78
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CURRENT ODL OF CNVBLD.ODL WILL CAUSE STACK OVERFLOW	29.1.2 M	Sep 78
RMS11.RTS		
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RMSUTL.OLB		
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RMS-11K V1.5

PACKAGE NOTES		
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Component	Sequence	Mon/Yr
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SORT-11 V2		
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ALTSEQ LINE IN SPECIFICATION FILE IS NOT ACCEPTED	30.2.2 M	Nov 78
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NCP ALLOWS INVALID NODE ADDRESS IN DEFINE NODE COMMAND	31.2.1 M	Jul 78
NCU		
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NCU DOES NOT CORRECTLY SET ITS RUN BURST AND PRIORITY	31.3.2 M	Oct 78
TLK		
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NCROOT		
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NETCPY DOES NOT ALLOW COPIES BETWEEN MM: AND MT:	31.8.2 M	Jul 78
NFT		
NFT PRINTS INCORRECT ERROR CODES ON FILE DELETIONS	31.10.1 N	Apr 78
NETWORK TRANSFERS OF .BAS FILES	31.10.2 N	Apr 78
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RSTS/E-RT11 DIFFERENT BLOCK NUMBER FOR FIRST BLOCK OF FILE	31.11.1 M	Jul 78
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Component	Sequence	Mon/Yr
RPGFNS		
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RPGASN		
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RPGDMP		
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PACKAGE NOTES		
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CERTAIN ASSIGNMENTS MAY CAUSE INTERNAL ERROR	34.1.6 M	Mar 78
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SORT FAILS WITH THE MESSAGE "SORT OUTPUT OPEN FAILED"	34.1.11 M	May 78
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UPDATE		
AZX INDEX EXISTENCE FLAG	35.2.1 M	May 78
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SKLTON		
FNQ9% FUNCTION	35.3.1 M	May 78
REQUES		
REQ3 DECODING PROBLEM	35.4.1 M	May 78
FIELDNAME ERROR	35.4.2 M	Jun 78
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Component	Sequence	Mon/Yr
RGRADE		
REGRADE SERIES OF PROGRAMS DOES NOT CALCULATE TOTCRED	35.5.1 M	Jun 78
RGRADE SERIES OF PROGRAMS	35.5.2 M	Aug 78
REGSTR		
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NETFIL		
CREATING UPX	35.7.1 M	Aug 78

DIBOL-11/DECFORM V4D

PACKAGE NOTES		
CTRL/C TRAPPING	36.1.1 N**	Jun 78
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IMPROPER USE OF RUNJB	36.1.3 N**	Jun 78
DATA TYPE COMPATIBILITY	36.1.4 N**	
DECFORM DATA ENTRY FOR PROGRAMS	36.1.5 N**	Jun 78
ZONED ASCII ARITHMETIC FOR BP2COM V1.50	36.1.6 O	Dec 78
ZONED ASCII ARITHMETIC FOR BASIC2 V1.50	36.1.7 O	Dec 78
DOCUMENTATION		
INDIRECT COMMAND FILE SPECIFICATIONS	36.2.1 M	Jan 79
BUILD PROCEDURES		
DBUILD SUPERCESSION	36.3.1 N**	Jun 78
DICOMP SUPERCESSION	36.3.2 N**	Jun 78
DIBOLR		
RSTAT VALUES	36.5.1 N**	Jun 78
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OPTIONAL PATCH TO EXPAND CALL/RETURN LIMIT (R6 STACK SPACE)	36.5.4 O**	Jun 78
MAXIMUM LENGTH ARGUMENTS	36.5.5 M	Feb 79
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DECFORM		
FOCOMR.MLB DECFORM LIBRARY	36.6.1 N**	Jun 78
NO RMS SEQUENTIAL FILE UPDATES	36.6.2 N**	Jun 78
FILE VALIDATION RECORD SIZE ERROR	36.6.3 N**	Jun 78
DATA ENTRY FOR OTHER PROGRAMS GIVES BAD MESSAGE	36.6.4 M	Mar 79
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RMS NOTES		
RMS VERSION IS 1.5	36.7.1 N**	Jun 78
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NO KEY SWITCHING	36.7.3 N**	Jun 78
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CLARIFICATION OF SAMPLE ODL FILE	36.9.1 M	Dec 78

DECAL V2

QUIZ		
QUIZ01 DOES NOT INTERPRET AUTHOR VARIABLES CORRECTLY	37.2.1 M	Sep 78
CREATE		
END-OF-BLOCK INDICATOR	37.3.1 M	Aug 78
CREATE AND LEDIT1	37.3.2 M	Sep 78
SORT1		
SORT1 GENERATES A FATAL SORT ERROR	37.4.1 M	Sep 78

BASIC-PLUS-2 V1.5

BASIC2 COMPILER PATCHES		
SOME MIXED MODE ASSIGNMENT STATEMENTS GENERATE NO ERRORS	38.2.1 M	Nov 78
THE COMPILER EXPANSION OF A SYSTEM WIDE LOGICAL DEVICE NAME IS INCORRECT	38.2.2 M	Nov 78
OPTIMIZATION OF CONSTANTS CAN CAUSE ERRORS	38.2.4 M	Nov 78

Component	Sequence	Mon/Yr
BASIC2 RUN-TIME SYSTEM PATCHES		
NAME AS STATEMENT DOES NOT WORK PROPERLY, AND MAGTAPE (BACKSPACE) FUNCTION DOES NOT WORK PROPERLY	38.3.1 M	Nov 78
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The Digital Equipment Computer Users Society

DECUS

DECUS, the Digital Equipment Computer Users Society, was established in March of 1961 to advance the effective use of DIGITAL computers. It is a voluntary, not-for-profit users group, supported in part by Digital Equipment Corporation.

OBJECTIVES

The objectives of the Society are to advance the effective utilization of computers, computer peripheral equipment, and software manufactured and marketed by Digital Equipment Corporation, by promoting the interchange of information concerning their uses; advance the art of computation through mutual education and exchange of ideas and information; establish standards and provide channels to facilitate the exchange of computer programs among DECUS members; provide feedback to the computer industry on equipment and software needs; and to reduce the duplication of development efforts.

ACTIVITIES

1. SYMPOSIA

Symposia are held throughout the year in each of the DECUS Chapters. These meetings provide a forum for users of DIGITAL computers to meet with other users and with DIGITAL management, engineers, and Software Services and Field Service representatives. They are an opportunity for users to participate in DIGITAL Product Workshops and Product Planning feedback sessions. The technical papers and presentations from each symposium are published as DECUS Proceedings after each meeting and provide a permanent record of the meetings activities.

2. SPECIAL USER GROUPS

DECUS encourages subgrouping of users with common interests and/or geographical proximity.

Special Interest Groups (SIGs) promote the interchange of specialized information and have no geographical limitations. Specializations may be for application areas, subject areas (such as languages), or specific operating systems. A group of users must petition the Chapter Executive Board for recognition as a Special Interest Group. The group must have a chairman, and its organization must meet the guidlines of the Chapter Executive Board.

Examples of active SIGs are users of RSX-11, RSTS, RT-11 users, business system users, etc. For additional information, contact your Chapter Executive Secretary.

One of the most successful subgroupings are Local Users Groups (LUGs). There are numerous active LUGs in Australia, Canada, Europe, and the U.S. Local User Groups are basically geographic in nature; however, they may be geographic and specific as well.

The largest Special User Group is composed of users of the DECsystem-10 and DECsystem-20.

3. STANDARDS

DECUS promotes user activity in reviewing DIGITAL standards. Users are given the opportunity to comment on DIGITAL standards prior to their finalization.

4. PROGRAM LIBRARY

One of the major activities of the users group is the DECUS Program Library. The Library contains programs written and submitted by users and is maintained and operated separate from the Digital Software Distribution Center. A wide range of software is available, including languages, editors, numerical functions, utilities, display routines, and various other types of application software.

Library catalogs, updated periodically, contain descriptive abstracts and ordering information.

Information and forms for submitting programs to the Library may be obtained from local DECUS offices.

Programs are available to all members on a request basis. Orders for programs are made on DECUS Library Order Forms and directed to the local DECUS Chapter office. Information on the nominal service charge applied to most programs is published in the Library Catalogs.

As of January 1979, the Library contained approximately 1500 active software packages.

MEMBERSHIP

Membership in DECUS is voluntary and is not subject to a membership fee. Members are invited to take an active interest in the Society by contributing to the Program Library, to DECUSCOPE, and by participating in its Special User Groups and symposia. There are two types of membership: Installation Membership and Associate Membership.

INSTALLATION

An organization, institution, or individual that has purchased, leased, or has on order a computer manufactured by Digital Equipment Corporation is eligible for Installation Membership in DECUS. Membership status is acquired by submitting a written application to the appropriate Chapter Executive Secretary for approval by the Chapter Executive Board.

On acceptance of the application for membership, literature covering numerous DECUS services is sent to the Installation Delegate for reference and aid in maintaining active participation in the Society.

ASSOCIATE

Any person, who is not an appointed Installation Delegate, who has a bona fide interest in DECUS is eligible for Associate Membership.

Like Installation Members, Associate Members receive DECUSCOPE, the Society's quarterly newsletter, automatically. They may receive other DECUS material on request. Written application indicating desire to join must be submitted to the appropriate Chapter Executive Secretary for approval by the Chapter Executive Board.

On acceptance of the application for membership, literature covering the numerous DECUS services is sent to the member for reference and to enable active participation in the Society.

To become a member of DECUS, please return this form to the appropriate Chapter office listed below.

NAME:_____

COMPANY:_____

ADDRESS:_____

_____

CITY:_____

STATE/COUNTRY:_____ ZIP:_____

Membership Requested (check one):

☐ Installation ☐ Associate

January 1979

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P.O. Box 491
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DECUS U.S. and
Office of the Executive Director
One Iron Way
Marlboro, Massachusetts 01752
USA

SOFTWARE PROBLEMS OR ENHANCEMENTS

Questions, problems, and enhancements to DIGITAL software should be reported on a Software Performance Report (SPR) form and mailed to the SPR Center at one of the following DIGITAL Offices: (SPR forms are available from the SPR Center).

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France	DIGITAL EQUIPMENT FRANCE Silic 225 18, rue Saarinen 94528 RUNGIS Cedex / France
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